RAILROAD

MAGAZINE 50¢

Now Monthly

NOVEMBER, 1964

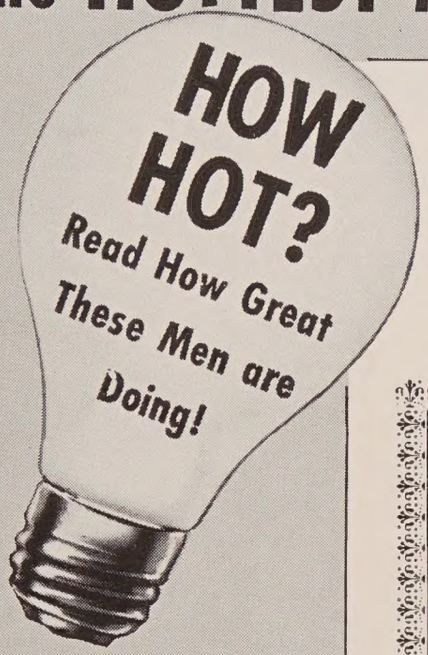
OCT 2 2 1964

A CENTURY OF L&N STEAM POWER *by Charles B. Castner*

We Built A Railroad On Top Of The World
UNDER THE ARCTIC ICE CAP

An EXCLUSIVE article by PAUL J. SZARKA

Just a Few Months NEW—and Already One of the HOTTEST Money-Makers in Direct Selling!



The MERLITE Longer-Life Light Bulb

The Only Light Bulb in the World Backed by this SENSATIONAL GUARANTEE:

ONCE YOU BUY MERLITE LIGHT BULBS—YOU NEVER HAVE TO BUY BULBS AGAIN—*NEVER!*

Averages $8.20 Per Hour in Spare Time!

"These guaranteed Merlite Bulbs surely sell. I have averaged $8.20 per hour for the time I have spent with them. That makes a nice income and wish I could give full time to the job."
L. C. Benedict, Virginia

Sold 178 Bulbs in First Afternoon

"This is an absolute fact and we are really pleased with this deal. The first afternoon I sold 178 Merlite Bulbs. I have a saleslady, and the first hour she worked she sold 29 bulbs. We are very much pleased with the reception we get from the customer. Enclosed you will find check for 10 display units. Please ship this order at once."
W. E. Foust, Arkansas

Man Averages $12.00 an Hour Part Time

"The Merlite Longer-Life Light Bulb is the answer to the direct salesman's prayers. It is fantastically easy to sell to housewives and home owners. They welcome you with open arms. Also have been very successful in placing displays in stores. I could place at least 6 displays weekly, and I am only working part time. I figure for every hour spent in selling the Merlite Longer-Life Bulb, I have averaged $12.00 an hour."
Philip E. Smith, Maine

Makes $25.64 in 3 Minutes Without Showing a Sample!

"When I first got your literature, and before I ordered any Bulbs, I mentioned the Guarantee to a furniture store owner, and he said 'Send me 2 dozen 150-Watt Bulbs.' Without even showing a sample or literature, I made $11.42 in 3 minutes. Later in the day, I mentioned the Bulbs to another man, and he ordered 1½ cases. Again $25.64 profit in less than 3 minutes. In my next call I sold another ½ case!"
Woodrow Baker, Oklahoma

Daring NO-TIME-LIMIT Free Replacement GUARANTEE Does ALL of the Selling FOR YOU!

It's amazing—how once in a blue moon a product comes along that actually fulfills all the big money-making promises made for it. It's fantastic—*14 words* are making it easy for men everywhere to make a "small fortune"—as much as $1,000 and more in a month, spare time or full time! Yes, the MERLITE LIGHT BULB is a dream deal! And it's simple to see why. When you can say the 14 magic words: "ONCE YOU BUY MERLITE LIGHT BULBS, YOU NEVER HAVE TO BUY BULBS AGAIN—NEVER"—no wonder you turn a big sale on the spot almost everytime. You need no fancy song and dance, no time-consuming demonstration, no fast-pitch sales talk. Because almost everyone jumps at the chance to buy Merlite Light Bulbs when they're offered an iron-clad guarantee (packed with each bulb) that *ends future light bulb bills forever;* a guarantee that unconditionally offers to replace FREE any burned-out Merlite Bulb, no matter when they burn out—in 5 years, 10 years—with no time limit; a guarantee that applies to any Merlite Bulbs purchased or replaced! Every home needs at least 12 to 24 Merlite Light Bulbs to replace old-fashioned short-life non-guaranteed bulbs in ceiling fixtures and lamps in every room. You make up to 120% profit on cost, can easily make $50.00 profit for just a few orders a day in spare time. Merlite men are making this much and more—right now!

Make Biggest Profits Selling to Retailers

We supply you with Self-Selling Displays at no cost. Place them in any kind of store. You do no selling, just collect big repeat profits by restocking Merlite Bulbs once a week or so. Get in on this most fabulous money-maker of the age! Rush coupon to get complete details—FREE!

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Rush Coupon for

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Money-Making Details and "No-Risk Offer" that Lets You Prove to Yourself that Merlite Bulbs Bring the Hottest Money-Making Opportunity in Years!

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PUZZLE: FIND AL

Al's got himself lost in his job.

He does his work. He draws his pay. He gripes, and hopes, and waits. But the big breaks never seem to come.

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Then, who's the figure standing out in the picture? That's Tom. Tom grew tired of waiting. He decided to act. He took three important steps:

1. Wrote to I.C.S. for their three famous career books.
2. Enrolled for an I.C.S. job-related course.
3. Started to apply—on the spot—what he was learning.

The others began to say, "Ask Tom, he knows." The supervisor began to take notice. The boss began to receive reports on Tom's progress. *And Tom began to move!*

It's a fact worth remembering: An I.C.S. student always stands out!

P.S.—You'll find men like Al everywhere—griping, hoping, waiting—reading this and skipping on. But forward-looking fellows like Tom will take time to investigate, will mark and mail the coupon and get the three valuable career books free. They're men of action. And a few short months from now, you'll see them start to move!

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RAILROAD MAGAZINE

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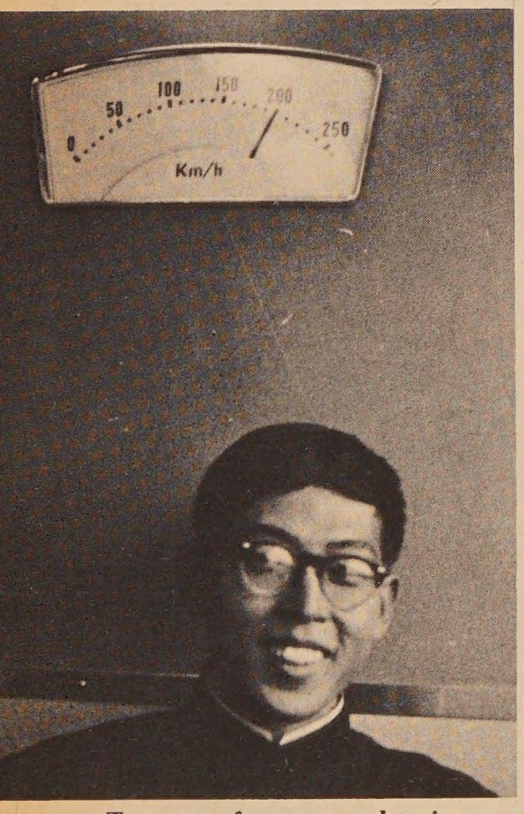

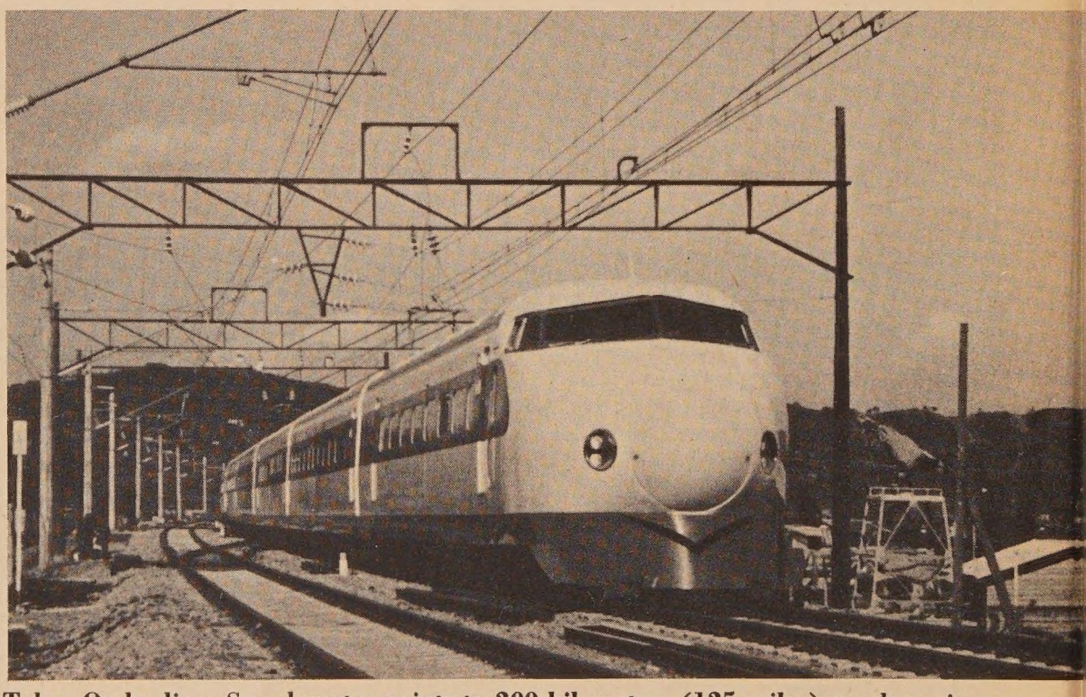

Test run of super-speed train on new Tokyo-Osaka line. Speedometer points to 200 kilometers (125 miles) per hour in car occupied by Akihiro Nakamura, 2-569 Kamiochiai, Shinjuku-ku, Tokyo, Japan, who photographed the train for our magazine.

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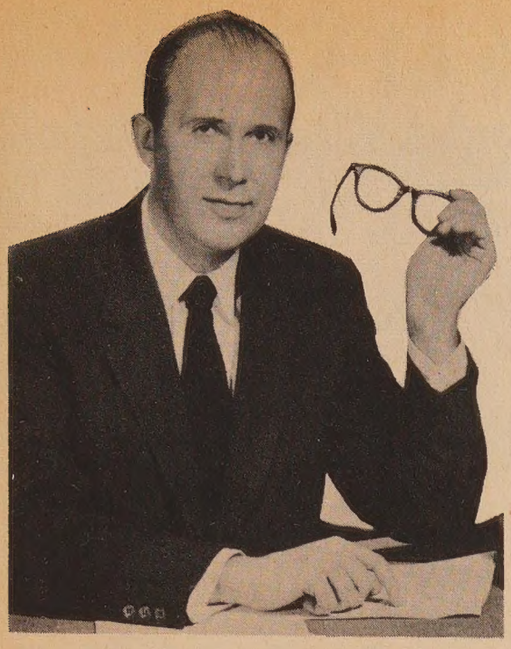

Don Bolander says: "Now you can learn to speak and write like a college graduate."

Is Your English Holding You Back?

"Do you avoid the use of certain words even though you know perfectly well what they mean? Have you ever been embarrassed in front of friends or the people you work with, because you pronounced a word incorrectly? Are you sometimes unsure of yourself in a conversation with new acquaintances? Do you have difficulty writing a good letter or putting your true thoughts down on paper?

"If so, then you're a victim of *crippled English,*" says Don Bolander, Director of Career Institute. "Crippled English is a handicap suffered by countless numbers of intelligent, adult men and women. Quite often they are held back in their jobs and their social lives because of their English. And yet, for one reason or another, it is impossible for these people to go back to school."

Is there any way, without going back to school, to overcome this handicap? Don Bolander says, "Yes!" With degrees from the University of Chicago and Northwestern University, Bolander is an authority on adult education. During the past eight years he has helped thousands of men and women stop making mistakes in English, increase their vocabularies, improve their writing, and become interesting conversationalists *right in their own homes.*

BOLANDER TELLS HOW IT CAN BE DONE

During a recent interview, Bolander said, "You don't have to go back to school in order to speak and write like a college graduate. You can gain the ability quickly and easily in the privacy of your own home through the Career Institute Method." In his answers to the following questions, Bolander tells how it can be done.

Question *What is so important about a person's ability to speak and write?*

Answer People judge you by the way you speak and write. Poor English weakens your self-confidence — handicaps you in your dealings with other people. Good English is absolutely necessary for getting ahead in business and social life. You can't express your ideas fully or reveal your true personality without a sure command of good English.

Question *What do you mean by a "command of English"?*

Answer A command of English means you can express yourself clearly and easily without fear of embarrassment or making mistakes. It means you can write well, carry on a good conversation — also read rapidly and remember what you read. Good English can help you throw off self-doubts that may be holding you back.

Question *But isn't it necessary for a person to go to school in order to gain a command of good English?*

Answer No, not any more. You can gain the ability to speak and write like a college graduate right in your own home — in only a few minutes each day.

Question *Is this something new?*

Answer Career Institute of Chicago has been helping people for many years. The Career Institute Method quickly shows you how to stop making embarrassing mistakes, enlarge your vocabulary, develop your writing ability, discover the "secrets" of interesting conversation.

Question *Does it really work?*

Answer Yes, beyond question. In my files there are thousands of letters, case histories and testimonials from people who have used the Career Institute Method to achieve amazing success in their business and personal lives.

Question *Who are some of these people?*

Answer Almost anyone you can think of. The Career Institute Method is used by men and women of all ages. Some have attended college, others high school, and others only grade school. The method is used by business men and women, typists and secretaries, teachers, industrial workers, clerks, ministers and public speakers, housewives, sales people, accountants, foremen, writers, foreign-born citizens, government and military personnel, retired people, and many others.

Question *How long does it take for a person to gain the ability to speak and write like a college graduate, using the Career Institute Method?*

Answer In some cases people take only a few weeks to gain a command of good English. Others take longer. It is up to you to set your own pace. In as little time as 15 minutes a day, you will see quick results.

Question *How may a person find out more about the Career Institute Method?*

Answer I will gladly mail a free 32-page booklet to anyone who is interested.

MAIL COUPON FOR FREE BOOKLET

If you would like a free copy of the 32-page booklet, How to Gain a Command of Good English, *just mail the coupon below. The booklet explains how the Career Institute Method works and how you can gain the ability to speak and write like a college graduate quickly and enjoyably at home. Send the coupon or a post card today. The booklet will be mailed to you promptly.*

DON BOLANDER, Career Institute, Dept. 3K, 30 East Adams, Chicago 3, Ill.

Please mail me a free copy of your 32-page booklet.

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D&RG employee tt reprint to Silverton, Santa Fe: 1919

Authentic reprint of 4th Div. D&RG (all narrow gauge beyond Alamosa) employee tt is full of data; $1.00 ppd. Others available too.

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THE MAIL CAR
where editors and readers meet

THE ENGINE shown on our front cover is No. 1977, one of the 22 Class M-1's that Lima built for the Louisville & Nashville in 1949, blasting through the hamlet of Ruckerville, Ky., seven miles southeast of Winchester. It came from a slide made by Bob Collins, an Erie-Lackawanna train dispatcher, 436 Radcliffe St., Wyckoff, N.J. Bob started taking railroad photos in 1936, now has over 15,000 negatives. Since 1948 he has shot more than 10,000 color slides. His rail-picture quest took him into 48 states, Canada, Mexico, Guatemala, and El Salvador.

"My first fantrip," he recalls, "was with the R&LHS on the *Royal Blue* to Ivy City at Washington, D.C. Later I rode the cab of the last K-5 passenger engine to run on the Erie, from Port Jervis to Jersey City. But my biggest railfan thrill was handling the throttle of a Hudson type on the National Railways of Mexico for more than 100 miles, in 1962."

Bob is a member of the Railroad Enthusiasts. During World War II he served overseas in a railroad battalion, spending much leisure time running steam locos in Holland and Germany ●

WE ARE rather proud to offer our readers an exclusive on the Ice Cap story. The author, Paul J. Szarka, president of Spur and Siding Constructors Co., Inc., tells us that after completing the Arctic job his company built an 18-mile railroad spur through the mountains at Mt. Storm, W. Va., including coal-yard tracks, to serve a new power plant there. The work was done in the winter of 1962-'63, sometimes in ten-foot snowdrifts and at 27 below zero, but men rugged enough and skilled enough to construct a railroad "on top of the world" were capable of licking these problems also. The same company holds contracts to build similar track facilities for a power plant being built at Elderton, Pa. ●

Robert F. Collins, train dispatcher, member of the Railroad Enthusiasts, who made the color-shot on our cover.

AIR-RAID VICTIM. "Before the war I was with the old Great Western Railway working at the roundhouse here in Tyseley," writes Arthur J. Richards, 21 Briarfield Rd., Tyseley, Birmingham, England. "I often read *Railroad Magazine* and kept in touch with American railfans and railroad men. It's a pity that the magazine is not sold in the news stores here.

"During the war Birmingham had some terrible air raids and one night a bomb injured me. I spent nearly two years in a military hospital. We had many sad cases there, other air-raid victims and wounded men from Dunkirk. After I got out, I sent some magazines to cheer them up, including copies of *Railroad* that American correspondents had generously given me. For the past four years I have been retired on a sick pension, but have never lost my interest in railroading in the U.S.A. and I wish some of my former friends would send me copies of *Railroad Magazine*." ●

INDICATORS. "Ever since I can remember," writes P. Hervey Angier, Southern Pacific engineer, 143 Roselawn Pl., Los Angeles, Calif., "the SP has used indicators to identify all trains. Now in CTC territory the following notice has been posted: 'Extra trains are not required to display train indicators or white classification lights. Engine numbers need not be removed from indicator boxes on arrival at destination.' This does not affect regular trains nor those in train-order territory. We have not used indicators on branch lines for quite some time, as nearly all SP branches are in yard limits and under rule 93." ●

NEWS AND COMMENTS. "I have been reading *Railroad Magazine* since 1930 and have a deep sentimental regard for it," writes J.D. Mahoney, 26 St. Michaels Ave., Pt. Chevalier, Auckland, New Zealand. "Best of all I like your stuff about the great days of steam. Delighted to learn that you are resuming monthly publication."

The Chesapeake & Ohio and Baltimore & Ohio, which are affiliated as a prelude to a full merger, have asked the ICC for permission to bring in a third partner, the Western Maryland. The team already owns 63.16 percent of WM's total stock.

Worst disaster in the history of the privately-owned Portuguese Railway Co. occurred on the night of last July 26th near Custoias. A car loaded with passengers broke away from a 2-car train and careened down a section of

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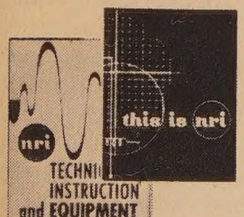
NRI Has Trained Thousands

EARL GROSS, Hanover, Ont., has spare-time Radio-TV service shop. Does work for four dealers. W. F. KLINE, Cincinnati, Ohio, went from factory laborer to his own business with sales of $158,000 in one year.

F. W. COX, Hollywood, Calif., averaged $150 a month spare time while training, now has his own full time business. E. DUANE BITNER, Northfield, N.J., works on missiles. He says, "NRI training gave me the biggest boost in my life."



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track flanked by walls, slamming back and forth between them, and tumbled off an embankment at the end of the walls, killing more than 100 passengers and injuring many others.

The Frisco has asked the ICC for permission to build a 41-mile line from Keysville to West Fork, Missouri, to serve a new lead concentrate mill.

The Reading has just asked the Penna. Public Utility Commission for the right to abandon all passenger service on its main line between Norristown and Pottstown and its Bethlehem branch between Lansdale-Bethlehem.

As most readers know, the railroads do not own all the freight cars they operate. More than 350 such cars are owned by Hudson Leasing Corp. of New York City, the nation's largest independent equipment-leasing firm, and many of the nation's Class 1 railroads use them.

Next issue of *Railroad Magazine,* out Nov. 1, will run an article on 2-10-4's by Bert Pennypacker and will carry current locomotive rosters of the L&N and Florida shortlines and a lively piece on "Those Harvey Girls."

"I started on the old Philadelphia & Reading as a lamp man when I was 17 years old," Engr. C.K. Oberholtzer wrote in *The Locomotive Engineer.* "I put coal oil into the lights on the old banjo signals for the first time on Jan. 10, 1901. I was so proud that I scarcely felt the bitter cold."

Canada's most modern railyard—a $15 million electronic complex 15 miles northeast of Toronto—was opened the other day by Canadian Pacific. It was built to handle 3,000 cars a day. Techniques used there include radar, television, electronic computer, radio, integrated data processing, microwave, automatic switching devices, and several remote-control systems to sort out freight cars into trains.

Something else for CP to crow about: its new breed of bi-level freight car which carries motor trucks. National Steel Car Corp. is building 75 of them in Hamilton, Ontario.

"I notice that the American methods of giving hand signals with lamps swung in various ways denote the action to be taken," writes John Drayton, British Railways engineer, 13 Sycamore Rd., Griffithstown, Pontypool, Monmouthshire, England. "Here in Britain we use oil lamps with green or red shades which, together with a white light, cover all movements: ease up or steady, go forward, backward, stop."

New York Central has just inaugurated Tele Central, the second largest industrial switching network in the U.S. and the first of its kind in the railroad industry. The new direct distance dial-telephone system includes 10,352 phone extensions in 406 cities in the Central's territory, covering 11 states and 2 Canadian provinces. It was designed to provide better and faster service.

Today, one of every three railroad employes works for one of the nation's six largest roads: the Pennsy, New York Central, Santa Fe, SP, B&O, and UP.

On the 80th anniversary of No. 29, the Burlington's fast mail train out of Union Station, Chicago, made its 29,222nd daily trip to Omaha, reports J.P. Davenport, Naperville, Illinois. The train consisted of three diesel locomotives totaling 6,500 hp, four express cars, a single RPO car, and 16 sealed mail cars. It carried 665,000 pounds of mail plus the express cargo. The first mail train, 80 years ago, had a 4-4-0, tender, and two mail cars.

With over half the operating employes as members, the Brotherhood of Railroad Trainmen is the largest operating union on the railroads.

New York Central Railroad has just introduced Flexi-Van schedules in slide-rule form. The slide-rule application enables Central's customers to pinpoint information within seconds. ●

MEXICO is a good place for retired American railroad men to live permanently on their monthly retirement checks, according to John E. Martin, 1249 Worthington St., Memphis, Tenn., an Illinois Central engineer who has often traveled south of the border and is married to a Mexican-born woman named Estela. His letter is an answer to numerous questions.

"With low taxation and the exchange rate of 12½ pesos for one U.S. dollar," he writes, "a person with a very modest income would feel rich there and enjoy a healthful climate free of cold weather, and the friendly, easy-going people. Time means nothing; no one seems to be in a hurry. The *senors* are polite, *senoras* gracious, and *senoritas* pretty. Elderly people are highly respected. With much singing and dancing, the people as a whole are happy.

"Two-bedroom houses or apartments rent for about $50 a month, including water. Domestic help is plentiful and cheap. A servant will clean and cook for you for $12 a month. Bus and streetcar fares range from 2½ to 3 cents. Haircut costs 40 cents. Taxis, 25 to 50 cents to any part of the city or town. Living in villages is even cheaper than in Mexico City; each place has its own personality, with a Spanish and Indian cultural background. Arnold Toynbee, the world's leading anthropologist and historian, says Mexico is the world's most democratic nation. A number of retired American railroaders have already settled in Mexico, especially in the capital. I would enjoy it myself—after I have made my last run on an Illinois Central diesel." ●

PASSENGER NOTES. Passengers on the morning train from Mons to Brussels, in Belgium, rebelled the other day because of fare increases. They halted the train so often by pulling the communication cord that railway officials put on another engine not connected to the alarm system. Passengers then used the coaches' hand-brakes to stop the train. Normally that train covers the 37-mile run in 35 minutes. This time it took 4½ hours.

Northern Pacific is expanding Slumbercoach service to its second streamliner, *The Mainstreeter,* which runs between St. Paul and Seattle.

Mary, Queen of Scots, was beheaded at London in 1587. "Now, 377 years later, British Railways have given *The Queen of Scots* the axe once again," *Rail News* comments, referring to discontinuance of the all-Pullman train with that name which had been running since 1928.

Southern Pacific is asking the ICC for a 30 percent increase in commuter fares on the San Francisco peninsula.

The Pennsy has just put into service 20 stainless-steel, reclining-seat coaches on its New York-Philadelphia-Washington line, making a total of 108 modern coaches now on that route, many rebuilt from Pullman roomettes.

The Press Club of Las Vegas, Nev., has its own mobile clubroom: an old N&W passenger-baggage car. ●

L&N "I began reading *Railroad Magazine* in 1919," writes James I. Hardman, P.O. Box 1575, Birmingham, Ala., "and am looking forward to the article on Louisville & Nashville steam power announced for your November issue. My father was a locomotive engineer on the L&N in Alabama from 1888 till Nov. 20, 1913, when his passenger engine turned over on a line that was being double-tracked and he was scalded so badly that he retired.

"Eight years later I hired out to the L&N as a locomotive boiler checker, later worked as a hostler helper and then a fireman. I remember when the road used a pay-car to pay its men with gold and silver, usually $5, $10, and $20 gold pieces."

SPECIAL OPPORTUNITIES

A number of one-man mail order enterprises are paying their owner an income of $40,000 to $50,000.

Mail order is big business. Annual catalog sales volume of Sears, Roebuck and Co. is over 700 million dollars.

HOW TO START

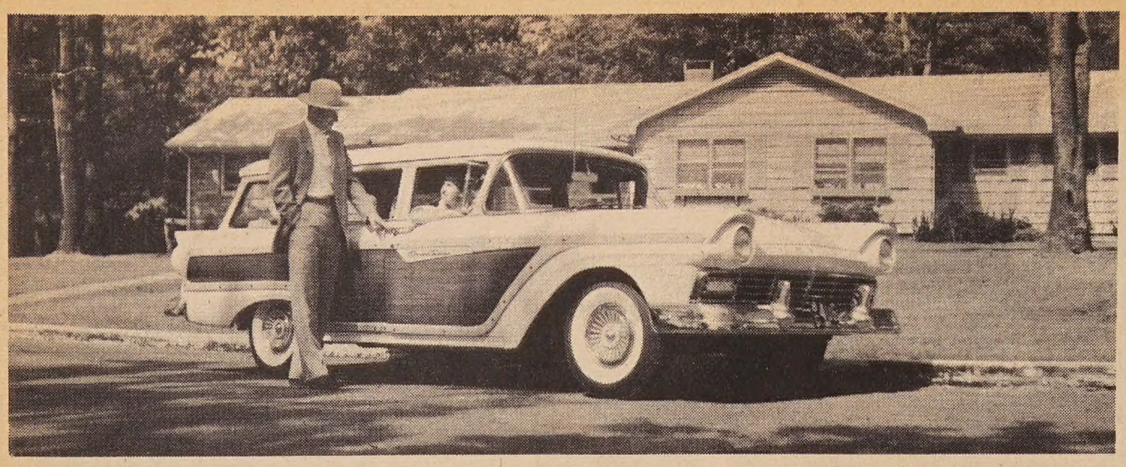
Your Own Mail Order Business

By Robert Stevenson

You can make a fortune by mail. New firms will set you up in a fabulous mail order business of your own! They'll make up your catalogs, prepare your advertising, supply mailing lists and even ship your products for you!

When Anthony Sambati injured his back and was laid off from work he never dreamed it would be a blessing in disguise. Bedridden for weeks, he decided to start a small mail order business. This was something he could run right from his own home and required very little capital to begin. In fact, Sambati started with less than $85.00.

He figured that a small mail order business might



After a short time in mail order, Sambati soon had a beautiful home with all the luxuries of a successful businessman.

provide a temporary income to support his family until he got back on his feet. His first step was to obtain a franchise from a large wholesale mail order firm which supplied him with all the necessary catalogs and mailing literature. It wasn't long until his spare-time venture blossomed into a booming enterprise. Drawing a small salary and pouring the rest of the profits back into the business, he soon had others working for him! Today he owns a large retail store, his own warehouse and a beautiful home with all the luxuries of a successful businessman.

Sambati's story is typical of a number of men and women who began a small mail order business with absolutely no previous experience, and made a huge success of it. These 'little' people are quietly pocketing big profits every day—many content to keep the business small . . . spending an hour or two each day in the privacy of their own home. No bosses, time clocks or small pay envelopes. No door to door selling, in fact, you never even meet your customers face to face.

Yes, a small one-man mail order business is ideal for anyone wanting a chance to gain financial security and independence. Yet thousands try mail order each year and fail, simply because they don't learn the few simple secrets of success early in the game.

Take the case of Bud Sheer who had been working for a theatre in a small New Jersey town. With only a few hours spare-time to spend each morning, he tried mail order to supplement his regular income. Like many beginners in this field, Sheer was faced with the problem of finding good mail order items which would have a high mark-up and repeat sales potential. But the biggest obstacle was the expense of printing a catalog.

Then he heard about the A. J. Statile Co. of Montvale, New Jersey—an organization set up to aid the small mail order beginner.

He wrote to A. J. Statile Co. for full information, sent in his application for a franchise and within a short time the cash began rolling in. Today Bud Sheer *owns* the theatre he once worked for. Sheer attributes his success in mail order to the A. J. Statile Co. Actually, the theatre he owns has become a side investment. He still uses the beautiful 300 page mail order catalogs supplied by A. J. Statile Co.

How does the Statile Co. help the beginner get a sound start in mail order? Very simply. Just as Henry Ford made automobiles within the reach of the general public—by mass production and large volume.

Let's take a few specific examples:

(1) All franchised dealers of A. J. Statile are offered ready to mail catalogs and sales literature. Each mailing piece has the dealer's name and address printed right on it. By printing millions of catalogs, Statile is able to offer these at a fraction of their regular cost. The artwork and layout costs for these catalogs would run into thousands of dollars for the beginner if he were starting from 'scratch'.

(2) Since all mailing material and catalogs contain your name and address, all orders come directly to you. Yet you don't have to invest one penny in inventory. All merchandise is stocked for you. In fact Statile has over $3 million dollars worth of mail order merchandise at your disposal.

(3) All packaging and shipping is done for you. You simply send a shipping label to Statile together with the wholesale cost of the items, and the merchandise is shipped directly to your customers under your own shipping label.

(4) A consultation service is provided to answer any questions you may have. You receive a secret list of over 100 national magazines which run free ads. You'll be shown how to obtain free publicity on your own mail order items. In addition, you obtain trade names and addresses of over 150 other mail order wholesalers who drop-ship top mail order items for you. You'll also be given all the government laws and regulations pertaining to a home operated mail order business. These laws are a 'must' for all beginners.

All this valuable information is covered in the Statile Mail Order Survey which every new franchised dealer receives from Statile before they begin. Formerly sold for $25.00, this survey has become the 'bible' of the trade. Mr. J. M. of Baltimore, Md., writes, "To tell the truth, all the information in regard to obtaining free ads is alone worth the $25.00 I paid you . . ." J. D. of Kalamazoo, Mich., states, "Just a personal note to say I am most satisfied with my $25.00 investment. Your sales plan is simple and well organized . . ." These are only a few of the many testimonials received praising the Statile Mail Order Survey.

(5) The catalogs and mailing literature offered by Statile Co. cover every conceivable mail order item. You select the field you are interested in . . . BABY ITEMS, TOYS, APPLIANCES, VITAMINS, BOOKLETS AND MAIL ORDER COURSES, you name it,

The thrill of receiving money in your morning mail is one you'll never tire of.

Statile has the catalog or mailing piece. Select your market, order your mailing literature and you're in business.

(6) You'll be told how to compile your own mailing lists—and this is the most important part of your business. Many a beginner has fallen by the wayside simply because he mails his catalogs to a poor list of names. Suppose, for example you offered a beautiful scale model of a 40′ Chris-Craft cabin cruiser by mail. You would probably make your mailings to boating enthusiasts and the chances are that nine times out of ten your mailings would show a loss instead of a profit. How would Statile help you solve this particular mailing list problem? He would show you where to get the names and addresses of *actual owners* of 40 foot Chris-Craft cabin cruisers! Surely every owner would like to have a scale model of his own boat. Strange as it may seem, such a mailing list is available to anyone. The secret is where to find it. This is just one example of how an experienced mail order expert giving you personal advice, may mean the difference between success and failure!

This same method of obtaining selective specialized mailing lists may be applied to practically any market . . . selling baby items to new mothers, selling toys to young children, etc., etc.

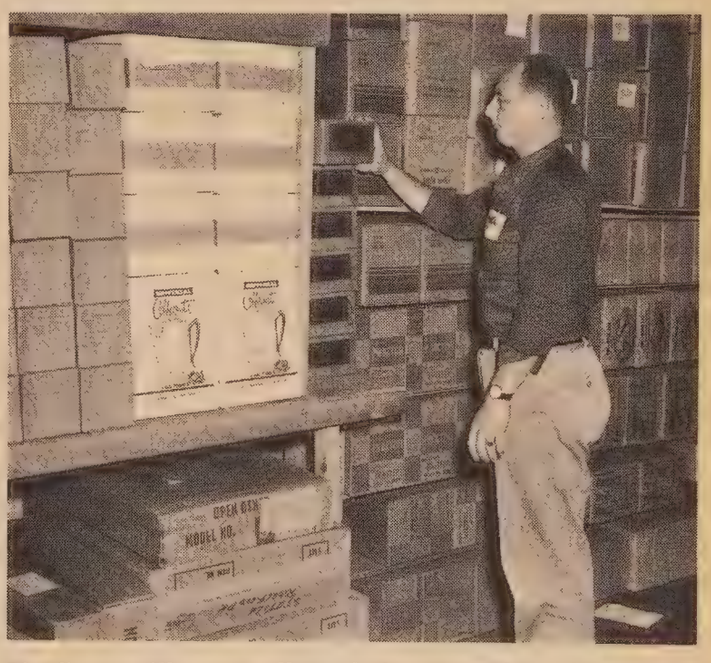
So much for starting your own mail order business. Now, a word of caution. OBTAIN YOUR MAIL ORDER FRANCHISE FROM A REPUTABLE MAIL ORDER FIRM. Unfortunately, during the past few years a number of ads have appeared in newspapers and magazines offering to start people in mail order. The ads are grossly misleading. Many imply that you can become a millionaire over night if you use their catalogs. Beware! Particularly if they operate their own mail order business direct to the consumer. These firms compete with their own franchised dealers! They could just as well mail all the catalogs themselves. They don't need you.

Other shady firms fail to drop-ship your orders promptly, thereby losing customers for you. In mail order, prompt shipment is an absolute requirement for a successful operation.

Deal only with firms whose business is preparing catalogs and shipping merchandise. They operate on a strict wholesale basis for franchised dealers exclusively. Such a firm is the A. J. Statile Co. Letters from successful franchised mail order dealers speak for themselves. A woman from Milwaukee writes, "It has been better than my expectations." A gentleman from California states "we are quite pleased with the response we are receiving". Another man from Wisconsin writes, "To say the least, I am more than satisfied."

Yes, a small mail order business offers you an opportunity to earn a second income, or—if you work at it in earnest, a chance to strike it rich. The young housewife in St. Louis may be content to make an extra $20.00 a week . . . the office worker in Los Angeles may be aiming for $150.00 weekly full time business . . . and the ambitious schoolteacher in Newark may reach $20,000 a year. What is your objective? Set your own goal, pick your own hours, and the sky is the limit.

Even a government report stated that a number of the most successful one-man mail order enterprises make as high as $40,000 to $50,000 a year! But frankly, this is the exception rather than the rule. Most mail order operators are content to earn a comfortable living doing little physical work, but enjoying their work thoroughly! We don't say you'll be a mail order millionaire or another Sears & Roebuck, but if you're looking for a busines of your own with financial security, the answer is mail order. If you've already tried mail



Big firms will carry all stock for you. They ship orders direct to your customers using your own labels.

Your Own Catalogs of Top Mail Order Items!

A. J. Statile Co. will prepare your catalogs, write your sales letters, supply mailing lists and even ship merchandise for you, using your own shipping labels.

order with little or no success, don't give up! Try to analyze what went wrong. Success comes only to those who keep trying and learn from their own mistakes. Again we emphasize, deal only with a reputable firm.

The A. J. Statile Co. has been in business for over twelve years. They gladly furnish bank or trade references upon request. They are probably one of the largest mail order wholesalers in the country. Whether it be toys, gifts, vitamins or appliances—they've got it ready to ship under your label WITHIN 24 HOURS!

Firmly convinced that no other business offers the tremendous opportunities of mail order, A. J. Statile, president of the firm, is an outspoken advocate of the man or woman who wants to start in business for himself. As Statile puts it, "by all means, start your own business and start NOW! If you want a chance at security and financial independence make your choice mail order. There's nothing like it. Absolutely nothing!"

MAIL COUPON BELOW — NO OBLIGATION

A. J. Statile Co., Dept. 98, Montvale, New Jersey

Dear Mr. Statile:

Please send me complete FREE details telling me how I may obtain a franchised mail order dealership with your firm. I understand I am under no obligation and no salesman will call on me.

NAME ..... AGE ..... SEX .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

PREVIOUS EXPERIENCE, IF ANY .....

A curved segment of the completed track on the world's most fantastic railroad, at an American military base in Greenland.
U.S. Army photograph

We Built a Railroad on Top of the World

UNDER THE ARCTIC ICE CAP

Exclusive feature by Paul J. Szarka

MAYBE you read about Camp Century in the newspapers or saw Walter Cronkite's nationally televised program. "The City under the Ice." I refer to the camp which the Cold Regions Research and Engineering Laboratory of the United States Army set up in Greenland in the bleak wilderness within 800 miles of the North Pole.

That undertaking, known as Project 6, has as one of its chief aims the study of future potentials of a sub-surface railroad track network under the polar ice mass. Anticipating future exploration of this "last frontier," carefully picked men have been making dramatic experiments with sub-surface traffic for a possible all-weather, all-year, railway transportation program.

I first heard of the plan early in 1962 when an Army officer asked me for technical data concerning the methods and feasibility of building an experimental railroad track on top of the world, under the Arctic Ice Cap, adjacent to Camp Century. The Army wanted me to supply the engineering

know-how and supervisory personnel for such a job.

This I was proud to do. As president of the Spur and Siding Construction Company of Detroit, Michigan, I have had some experience in building unusual railroad lines, even under difficult circumstances.

I was told that the required materials such as rails, ties, fastenings, and track tools and equipment had already been shipped to the snow-covered site and that manpower would be available to us from enlisted personnel of the U.S. Army Polar Research and Development Center at Belvoir, Virginia. These men were then stationed at Camp Century, on detached duty. Additional labor would be provided by student engineers who had been sent to the camp in Greenland to supplement their education.

In accepting the challenge, I realized that ice would be our only sub-surface foundation on which to support the segment of standard track and I naturally expected to find many complications. I signed a contract with the Army to supply the consultant service and supervisory personnel. I knew that this would not be the first time in history that a railroad had been built on a roadbed of ice and that trains had run on such a railroad, but never before, to my knowledge, had one been constructed *into* and *under* the ice as well as *on* the ice.

Only after I arrived at Camp Century with my men in mid-August of 1962 did I realize fully the importance of the proposed sub-surface track. The base commander there greeted us cordially and placed his resources and facilities at our disposal for the bold undertaking.

During our stay in Greenland, we were quartered in the civilian section of Camp Century. Each working day we would leave the safety and comfort of the City under the Snow and make a rugged journey of about one-third of a mile across the top of the incredibly cold, hard, and glistening Ice Camp for another day's activities.

All track materials were stored at or near the entrance to the ice-walled tunnel, 25 feet below the top of the windswept Ice Cap The tunnel, 18 feet wide, was subsequently covered with corrugated metal and a final layer of snow to protect it from the furies of sub-zero weather. Our first task was to haul these materials down under the ice to the trench we had dug in order to build the world's northernmost stretch of track.

We laid the rails hopefully, not knowing whether or not the frigid temperature would snap the steel in two. To fulfill our mission, it was necessary to operate rail traffic on the line to simulate the actual movement of freight over a standard railroad. For this purpose, the Army unit had shipped to the site a fifty-foot flatcar which, however, lay buried under the ice in a disassembled state. Like all materials used in Project 6, the car was of standard equipment and standard manufacture.

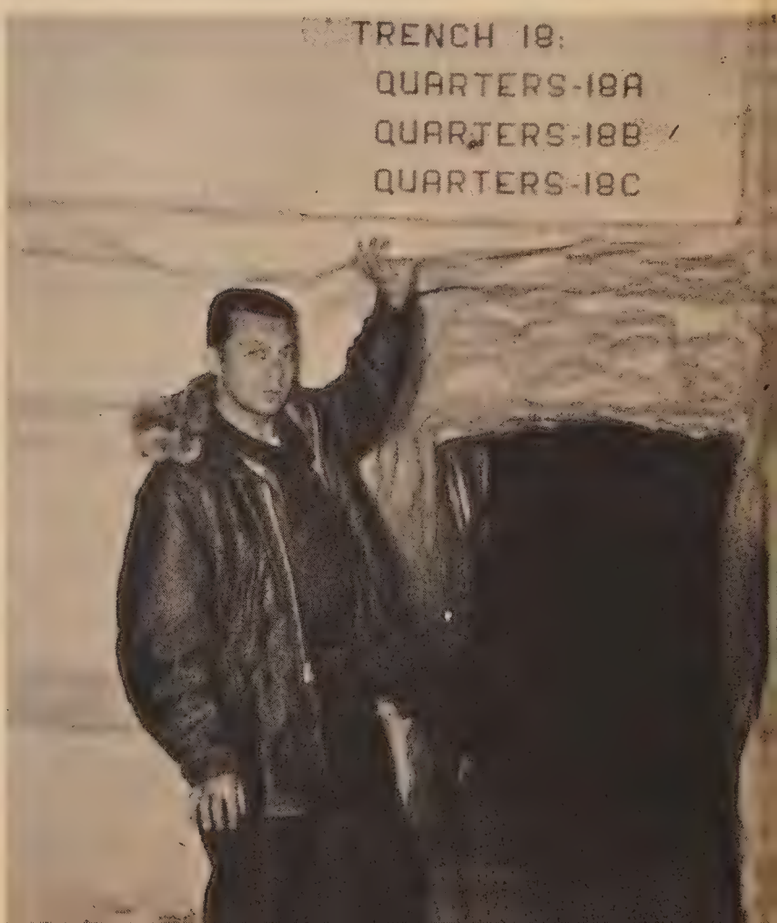
We laid a fifty-foot length of track on "snowshoes" at the mouth of the trench and then reassembled the car on this "sled." After that, we lowered away the sled, inch by inch, until it abutted the main track. Then we coupled the sled track onto the longer track and released the flatcar to roll into its new home.

Our next step was to load the car with 60 tons of metal for the crucial stage of the experiment and have it pulled — gingerly at first — by a five-ton Army truck in lieu of a locomotive. We all watched anxiously. Would the track remain firm on a roadbed of hard bluish ice under the impact of a load of freight and the weight of the heavy truck?

Well, it did hold firm. The men gathered tensely in the bleak, gleaming, ice-walled cavern looked at one another with smiles of relief and satisfaction. Thus far, at least, the great experiment had been successful. Later, *Architectural Forum* described our venture as "an extraordinary Arctic subway," the purpose of which was "to determine whether or not a full and complete under-snow railway system might be built from the beginning of the Ice Cap, approximately 30 miles from the shoreline of the Arctic Ocean, to Camp Century's supply base camp, 138 miles distant."

"Eventually," said the magazine, "a railway which would snake hundreds of miles under the Ice Cap, to serve many

At Camp Century, as the U.S. Army called its base in the Arctic wasteland, our author is shown contacting the outside world by radio-phone-patch and standing at the entrance to civilian headquarters which served as his home-away-from-home.



futuristic needs, is thought practicable as an ideal way to supply polar communities built below the surface of the ice."

The potential of our little railroad is, at this time, beyond comprehension. Much more could be said about it but understandably might not pass military censorship. I quote from *Blue Book* magazine for November, 1962:

"With a fleet of 16,000-ton icebreakers and a twenty-year head start in know-how, Russia may now be carving under-the-snow bases that will speed H bombs to the U.S.A. within seconds. Alarmed Pentagon experts know only one thing for sure: we must catch up in the Arctic to prevent an insurmountable lead by the U.S.S.R. The United States, however, has the lead in snow-and-ice engineering and will continue to hold it."

Whether or not the Soviet Union is actually building such under-the-snow bases is pure speculation. What interests me more specifically is the railroad that we built on top of the world. Anders Georg, a feature writer who interviewed me, wrote this story for his paper, the *Berlingske Tende* of Copenhagen, Denmark:

"The railroad tracks were laid by the private firm of Spur and Siding Constructors under the leadership of Paul J. Szarka, who has started to dream about larger Arctic railroad networks. By driving the experimental train thousands of times back and forth, it can be determined how much the ice foundation can bear.

"The first experimental measures taken have been very promising, and it is not expected that problems will occur with the foundation. To reduce snowslides in the tunnel, it is thought electricity would be the preferable source of power for locomotion. As it is possible to have snowplows on the tracks, one could also reasonably scrape the sides and ceiling of the tunnel when required.

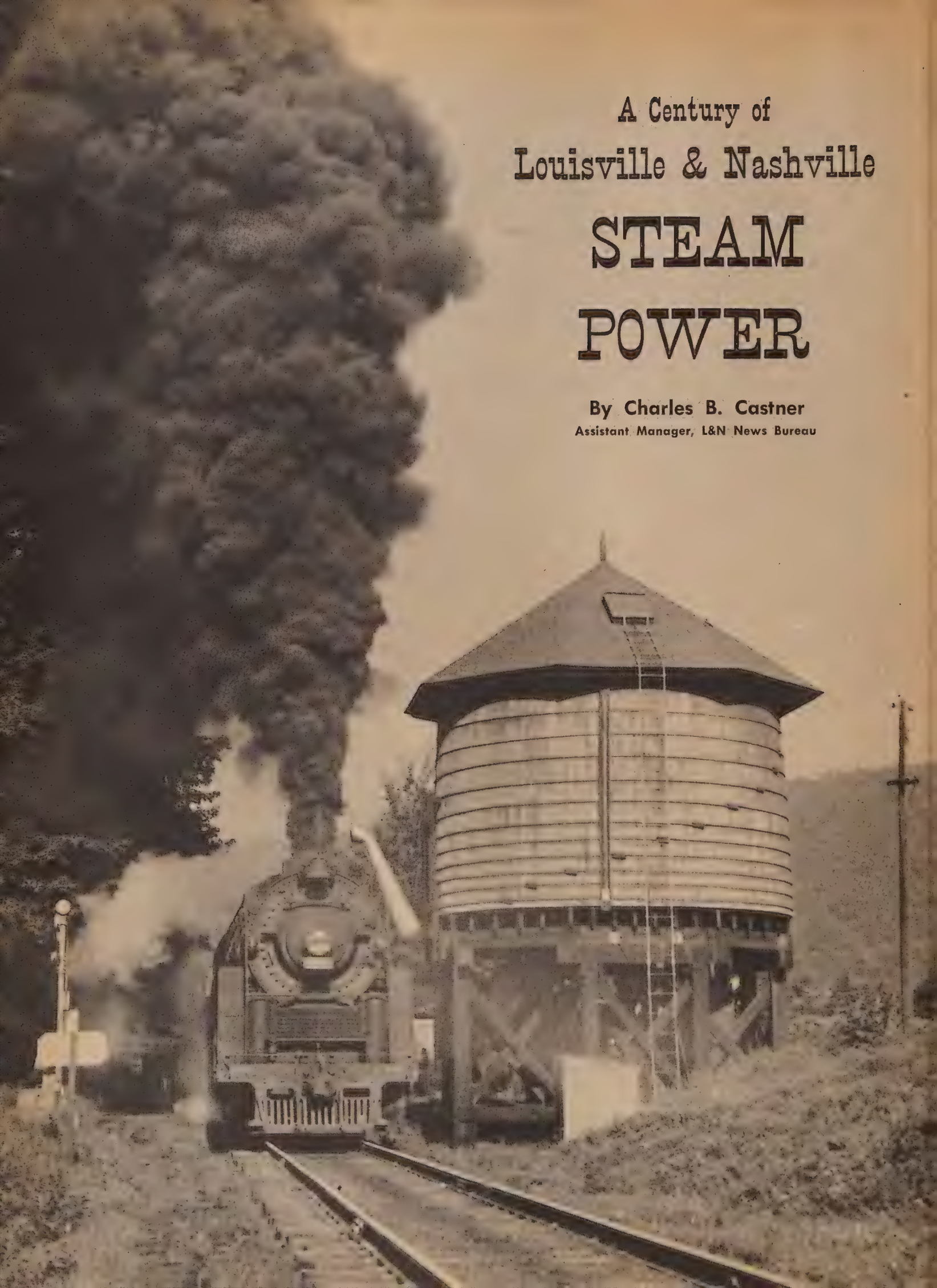
"In looking at all the alternatives, it would be possible to live with the constantly shifting fissures in the glacier, which are internationally known as crevasses. All railroads are inspected constantly and naturally the same would hold true for a railroad network under the Ice Cap. Since the crevasses seldom get to be more than several feet wide, there is no serious danger that the track will collapse. When an opening is discovered it can be filled with snow, in exactly the same manner that crevasses are filled when an over-the-ice tractor-train makes the journey."

That little stretch of track surrounded on all sides by hard bluish ice up there in Greenland has made history. It is, in fact, the world's most fantastic railroad system. ●

No swivel-chair executive, Paul Szarka did hard muscular work on the engineering job he supervised. We see him (at left) with a fellow known as "Smitty" clearing and leveling snow for a track extension in the weird Ice Cap tunnel.

Both pictures are U.S. Army photographs

The moment of triumph came when truck pulled loaded car over rails laid on ice.



A Century of Louisville & Nashville STEAM POWER

By Charles B. Castner
Assistant Manager, L&N News Bureau

Berkshire No. 1966, heavy power under coal chute at DeCoursey, Ky., engine terminal in 1956, final big year of L&N steam.
John B. Fravert, 107 Crestwood Ave., Louisville 6, Ky.

(All photos by Louisville & Nashville RR. except where otherwise credited)

THE ROLLING blue-grass country of Kentucky has long been noted for its sleek thoroughbred racehorses, while its largest city, Louisville, produced equally famous horses of iron for the Louisville & Nashville Railroad.

From our shops in South Louisville and at 10th and Kentucky came more than 400 glistening new steamers for freight and passenger runs, including No. 29, the *Southern Belle*, often called the South's most beautiful engine, adorned with the painted figure of a lovely woman, as well as numerous rebuilds. Nearly 300 of the new ones were fabricated to L&N's own designs, the work of master mechanics who will live forever in railroad history.

Last and finest of the Louisville & Nashville's new steam engines were M-1 Berkshires such as No. 1985, pictured near Norton, Va., in 1949.
H. Reid, 8549 Wayland St., Norfolk, Va.

The ancient red brick buildings and tall smokestack of our shops still dominate the city's South End. Even today, the old power-plant whistle is an institution. Hundreds of families "rise 'n' shine" when it blows each morning at seven. Tradition says it will sound a final call on the Judgment Day.

L&N built some great locomotives. No articulated or multi-cylinder experimentals. At times, though, it toyed with the idea of *buying* Mallets and in the 1920's it actually dabbled with a pair of three cylinder jobs. But The Old Reliable, a bulwark of conservatism, followed a policy of ignoring the odd-wheeled types and choosing the more practical.

O. S. Reynolds, our manager of employe relations, Mechanical Department, who spent many years at South Louisville dismantling and rebuilding more engines than he can remember, is quick to put in a good word for steam power.

"The 1500 series light Mikados of the United States Railroad Administration design were the best all-purpose locomotives we ever owned," he says. "Although capable of good drawbar pull, they had wheels high enough for fast passenger runs and they held up very well mechanically."

A retired L&N draftsman named Carl H. Lochner, Sr., thought so much of our Consolidations in the H-23 and H-25 classes that he made a wooden replica of one of them, one-twelfth size. "At the time South Louisville was building those engines," he recalls, "I was serving an apprenticeship and spent about nine months at the layout table planning material for their construction."

South End crews still reel off tales of how the USRA Pacifics, Class K-5, scorched southern Alabama rails with our crack train, *The Pan American*, running in sections. But according to W. A. Rice, motive power superintendent in charge of operations, "The Berkshires were the best doggone engines we ever had." Many years ago Rice cut his railroading eye-teeth on an

The L&N's 10th and Kentucky Shops looked peaceful enough in this old photograph, taken at the time of the Civil War. Engine No. 37, in the foreground, was originally a 2-6-0, built by Baldwin in 1860. Ten years later Thatcher Perkins rebuilt her as a 2-6-0.

Early L&N capstacked 2-8-0's loaf cozily side by side at the 10th and Kentucky Shops, in 1888. No. 196, at left, was turned out by Rogers. The other, No. 244, was one of the home-made engines equipped with Belpaire fireboxes. "The Old Reliable" pioneered in the use of Belpaires. By looking closely you can see the letters *L&N RR* stamped into the firebox fronts.

Last L&N 4-6-0, No. 33 (Baldwin '12), struggles up a grade into Spurlington, Kentucky, in 1950, doggedly pulling a mixed train on the Greensburg branch.

Oct. 24, 1959: fans greeted the brief return of steam on L&N's main steam when a borrowed Illinois Central 4-8-2 took an excursion train from Louisville to Nashville and back to celebrate the centennial of rail service between those cities. Scene: Green River bridge at Munfordville, Kentucky.

Afternoon shadows deepen as yard goats (two 2-8-0's two 0-8-0's) sit on ash pits, in 1949. At right is roundhouse; at left are South Louisville Shops, which built three of these locos. Third engine from the left was 0-8-0 No. 2149 (Richmond, 1924).

Photograph by John B. Fravert

M-1 backhead and, more recently, he helped to pamper the Civil War engine known as the *General*.

OUR charter dates to 1850. The first L&N rails were spiked down in 1853 and '54 between Louisville and Shepherdville, Kentucky, and its first three new engines were delivered shortly afterward by the Kentucky Locomotive Works in Louisville. Little is known about those three. They were probably 4-4-0's, built for six-foot gage, to which the line was originally projected. In 1855 the management decided on five-foot gage to conform with other roads in the South. We doubt that any of the three six-footers turned a wheel on the L&N. They were sold later to the Ohio & Mississippi (now part of the Baltimore & Ohio).

Two 4-4-0's built by Niles in Cincinnati became L&N's first *active* steamers; and in the next five years more Eight-wheelers followed — from Baldwin, Fairbanks (Taunton), and Moore & Richardson. The Baldwin plant also built a pair of 0-6-0's and an 0-8-0 pusher named *Muldraugh* for service on the long grade south of Lebanon Junction, Kentucky. Other early power bore such regional names as *Barren, Hardin County, Green River,* and *Louisville.* Two engines were named for early presidents of the road, *Governor Helm* and *James Guthrie.*

In 1858 the Louisville & Nashville bought the Kentucky Locomotive Works, with its well-equipped shops geared to overhaul engines and its know-how to build new ones. Those shops stood at 10th and Kentucky streets near the L&N depot at 9th and Broadway and for a half-century they produced more than 100 new or rebuilt engines.

Huge bay in erecting hall of South Louisville Shops accommodated forty locomotives. To the right, under the same roof, was the machine shop. These shops were designed and built so well that 45 years later they still could handle giant 2-8-4's.

Our road is still using three of the original buildings but for other purposes.

October 27, 1859, was a red-letter day. A special train bearing dignitaries and company officials in top hats steamed to Nashville and back over the newly-completed main line. Next year our shops turned out their first new locomotive, an Eight-wheeler numbered 30. She had 66-inch drivers, 14x 22-inch cylinders, and an overall weight, minus tender, of 44,000 pounds. There is no available account of that magical moment when she moved forth under her own power for the first time. No doubt there was cheering and back-slapping as No. 30 began a test run.

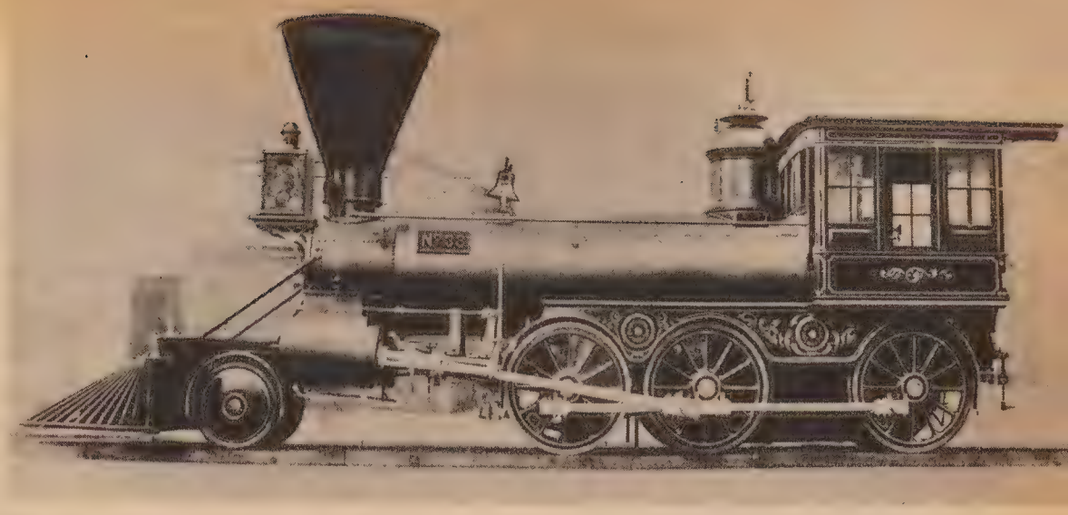
Linking the North with the South as it did, the L&N was drawn inevitably into the Civil War. During the spring of 1861 as the two sides were girding for battle, 4-4-0 woodburners puffed out of the long, rambling, wooden "car shed" in Louisville with boxcar loads of ammunition, food, medicine, clothing, horses and harness—just about everything the Dixie agents could buy.

Then in '62, after the *General* had been seized and held for a few exciting hours by Union saboteurs in Georgia, the gray-clad troops withdrew from Kentucky and much of Tennessee. What equipment the rear guard couldn't couple up and move they set ablaze.

At Bowling Green, shops and depots went up in smoke and at Clarksville the retreating forces sent one badly-battered engine careening into the shallow Red River. Two years later, L&N crews, needing power desperately, dragged up the mud-caked locomotive from the river bottom, patched her up, and put her back to work.

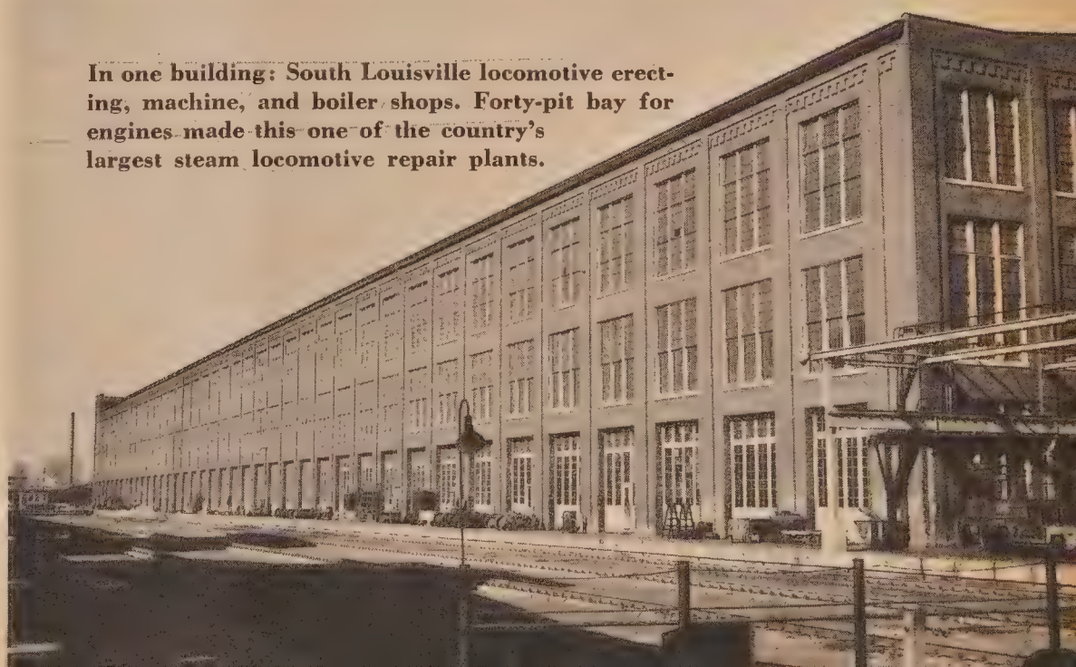
ANNUAL reports in the war years recounted the punishment inflicted upon the young railroad. Even after the fighting had shifted further south, company property continued to be prime targets for hit-and-run raiders. On six occasions in 1862 and '63 John Hunt Morgan's Confederate cavalry galloped into northern Tennessee and Kentucky to hammer the L&N, then in Union hands. Each time, smoke curled skyward from blazing freight cars, railroad buildings, and wood-fueling platforms; rails and telegraph wires were ripped up, and bridges and tunnels blown in. For weeks afterward, construction crews toiled mightily to restore operations.

The machine shops at 10th and Kentucky helped to keep the trains rolling. Some workmen pounded together replacement bridge superstructures right

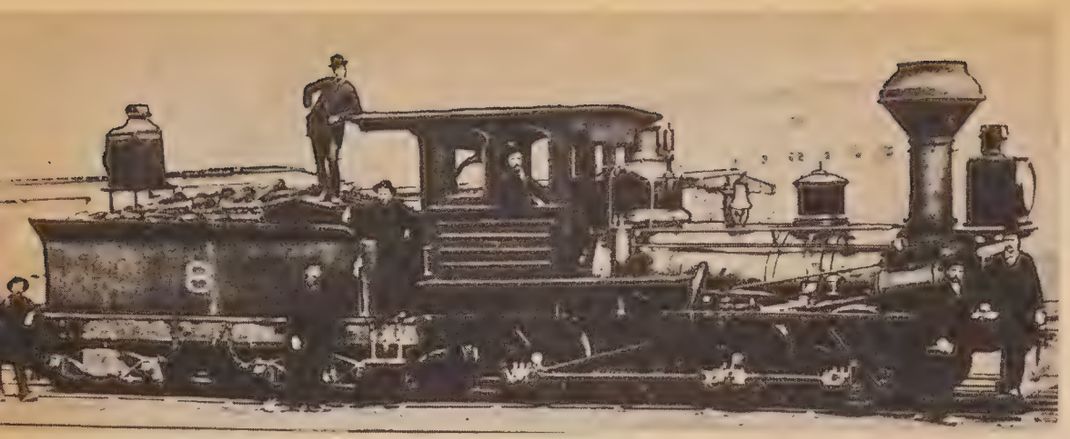


The broad-stacked 38, built by Baldwin in 1860, just before the Civil War, as one of L&N's first Moguls, was gaily painted, embellished with scrolls and a pictorial headlight. During the war she went south with the Confederate armies. In 1870 Thatcher Perkins rebuilt her to a 4-6-0 type at the Louisville Shops.

Wrecked in the Civil War and submerged two years in the Red River at Clarksville, Tenn., the 206 was finally salvaged and rebuilt for service. Norris had built her in late 1850's for the Memphis, Clarksville & Louisville Railroad, which, after the guns stopped booming, became the Memphis branch of the L&N.



In one building: South Louisville locomotive erecting, machine, and boiler shops. Forty-pit bay for engines made this one of the country's largest steam locomotive repair plants.



One of L&N's earliest engines (Baldwin, 1858), with a flexible beam truck, was named *Davidson* after a Tennessee county. You see her switching in the 1880's.

on the shop floor while others in a nearby building were forging a steady procession of new freight and passenger rolling stock to replace wartime losses.

No less a personage than General William T. Sherman praised the L&N for helping to supply Union armies in the great Atlanta campaign of 1864. The L&N formed part of a 450-mile supply link from Louisville to Georgia that, from May until November of '64, steamed food, guns, uniforms and ammunition to the 100,000 soldiers of Sherman's command storming the defenses of Atlanta. Wrote Sherman in his memoirs, "I repeat again and again that the campaign would not have been possible without these railroads."

During its first fifteen yars (1850-'65) the road was harrassed first by construction difficulties and then by war; but the next two decades, despite the invasion of carpetbaggers, saw its mileage doubled and even tripled, the L&N becoming a major Southland carrier.

For much of that time the great Thatcher Perkins, former B&O master of machinery, directed our motive power development. One writer described Perkins as a "shrewd New Englander . . . silent and austere but thorough and hard-working," adding that his fame as a locomotive designer preceded him into Kentucky.

Perkins hired out to The Old Reliable in 1869 as master mechanic and general purchasing agent. Four years earlier, he had helped to found the Pittsburgh Locomotive Works at Allegheny, Pennsylvania; and now, in 1870, the L&N shops at South Louisville produced the first of several batches of steamers he designed.

Those three were low-wheeled 4-4-0's numbered 77, 78, and 79, labeled on the original drawings as "mixed goods engines." (Even today, in Great Britain a *goods* train is a freight train.) In 1871 the same shops turned out three similar American types and five Ten-wheelers numbered 88 through 92. The latter, reflecting their designer's earlier success with that type on the B&O, went into freight service. So fine was their performance that, in 1872, Perkins had five wartime Moguls (Baldwin, 1863) brought to Louisville and rebuilt as 4-6-0's.

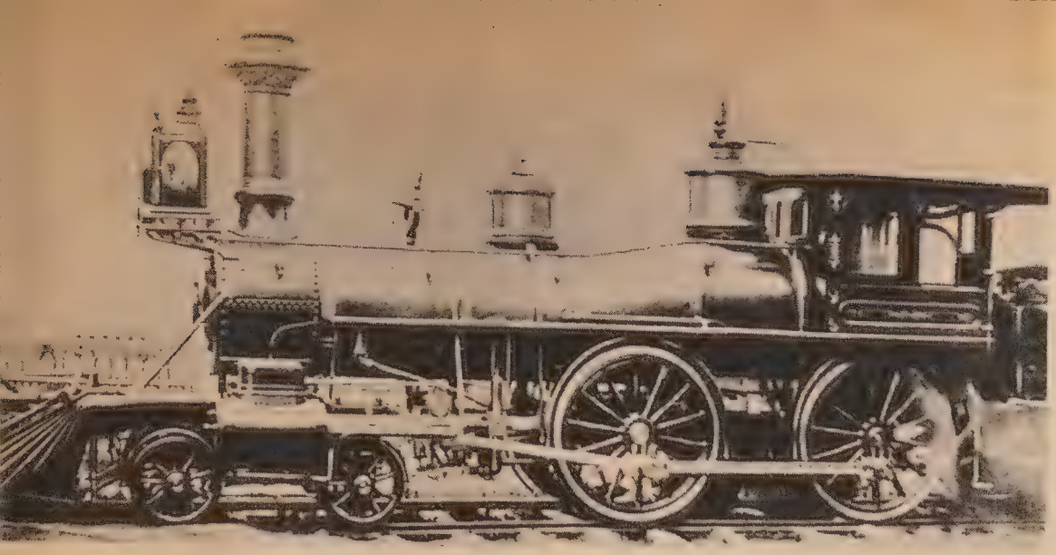
Pretty soon L&N needed heavier, more powerful freight-haulers, so the master mechanic designed a huge new Mogul, larger than any of the six-coupled jobs then in service. His blueprints provided for 54-inch drivers, 18x24-inch cylinders, and an overall weight, minus tender, of about 80,000 pounds; but there is no record that South Louisville actually built such a Mogul. Obviously, though, Perkins' plans were sound, for in 1872 and '73 the Rogers works at Paterson, New Jersey, outshopped not less that thirty 2-6-0's to his general design.

Around that time, L&N's management became aware of coal's superiority over wood as locomotive fuel, and asked the local shops to convert a large number of woodburners. No doubt Perkins, with much experience on coal-burners from his B&O days, figured conspicuously in the decision to switch from fagots to black diamonds.

MOTIVE POWER absorbed Thatcher Perkins so deeply that there is little record of his personal life. About all we know is that between 1869 and '77 he boarded at several hotels in downtown Louisville. His life work became a legend in locomotive design and production, climaxed by the *Southern Belle*, a stately, graceful Eight-wheeler that is famed in verse and song.

The *Belle* rolled off the Louisville production line in 1871. Unlike the low-drivered 4-4-0's that Perkins also produced during that period, her wheels

Machinists remove a driving-wheel tire from the 1981, a Berkshire of M-1 class, at DeCoursey engine terminal (Covington, Ky.), across river from Cincinnati.



Thatcher Perkins' legacy to L&N: beautifully designed engines, including No.'s 29, the famous *Southern Belle* (upper) and 77, the low-wheeled 4-4-0 shown here.

measured 66 inches in diameter. This queen of the rails was designed for plushy passenger runs. Her brasswork shone like fire in the warm Kentucky sun. Gilt adorned her cab and tender, and a woman's picture enhanced her headlight casing. Will S. Hays, river editor of *The Louisville Courier*, personally turned out to admire and cheer the *Belle*. Through a poem which he also set to music and dedicated to Thatcher Perkins, he spread the saga of the trim and graceful engine from the Ohio Valley to the Gulf. The chorus runs as follows:

Clear the track, the bell is ringing!
Here she comes, on time!
Thatcher Perkins is the builder
Of the Twenty-nine.
She's a thing of beauty, flying o'er
the road.

The program of building and rebuilding locomotives which Perkins started in the early 1870's was extended into the '80's and '90's with the production of more 4-4-0 types and Moguls for road service and with 0-4-0 and 0-6-0 yard power. On each engine just above the smokebox door was imprinted "L&N RR Co." as a mark of distinction.

An important event on this system was the conversion of not less than 400 engines in the spring of 1886 from five-foot gage to four feet, nine inches, a mammoth task for any railroad! Meanwhile, in 1883, the shops produced their first Consolidation types, all of which performed ably in road tests on the rugged Henderson Division. In 1884 and '85 the management ordered 31 slightly heavier but otherwise similar 2-8-0's from Rogers.

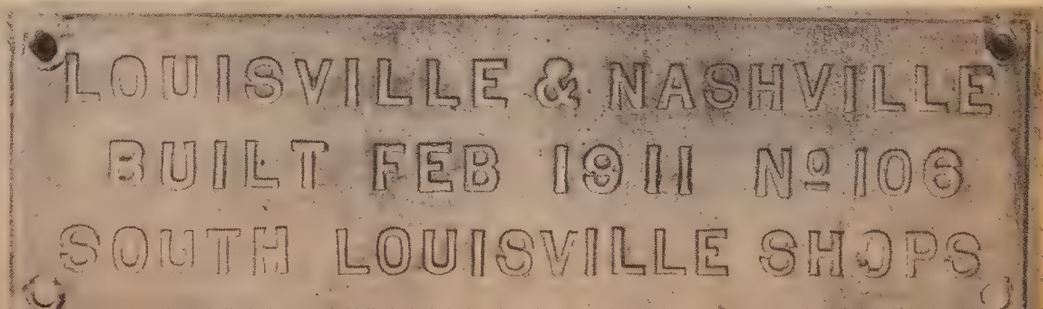
L&N-built Consolidations were among the nation's earliest freight-haulers built with Belpaire fireboxes. (Later, the Pennsy won fame with such fireboxes but did not introduce its Class R Consolidations with Belpaires until 1885.) The L&N Belpaires were also the largest of the type then known to railroading, giving as they did a grate area of 25.2 square feet. The boilers, incidentally, were rolled from heavy steel plate designed for a working pressure of 150 pounds. While Rogers' first 2-8-0-'s, built for the L&N, did not come with Belpaires, all succeeding 2-8-0's bought or built by The Old Reliable up through the H-21 Consolidations of 1903 were thus equipped. Our earlier classes of heavy main-line Ten-wheelers, acquired in the 1890's, also had Belpaires.

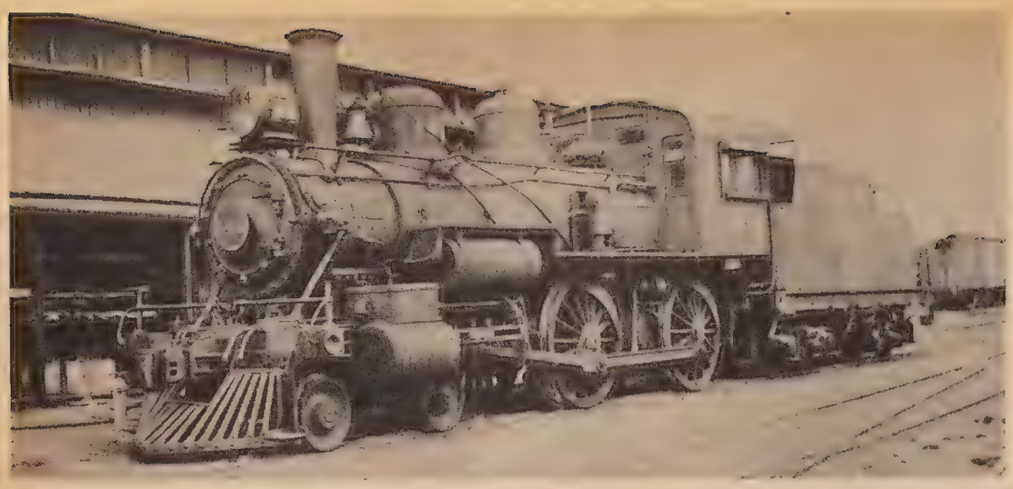
Of all the L&N's 2,000-plus steam locomotives, those particular Rogers and the home-made Consolidations were possibly the longest-lived. In the 1900's many were converted from road to yard service, to 0-6-0 switchers in Class B, and survived right up to dieselization.

Turn of the century found the old 10th and Kentucky shops woefully inadequate in space and machinery to meet the demands of the now-major carrier with trackage exceeding 3,400 miles. Zooming traffic required new motive power. In 1902 the president, Milton H. Smith, authorized the construction of new shops, yards, and a roundhouse, all at South Louisville. The L&N was entering what has been called its Golden Age of Steam.

By August, 1905, all men, machinery, tools, and work had been transferred from downtown to the new site. L&N now had a new shop area of 50 acres, including 35 separate buildings which housed the latest tools and machinery.

All locomotives built at South Louisville had bronze plates similar to this one.





Built by Baldwin as a 10-wheeler in 1889, the tall-stacked 144 was photographed in 1931 at South Louisville Shops, which had rebuilt her into a 4-4-0 in 1909.
John Adney, McGregor, Iowa

The locomotive section had a 40-pit bay with adjoining boiler- and machine-shop sections. New foundry and pattern shops could cast all iron and brass parts, even to the pouring of frame sections and cylinders. A variety of forgings could be made in the blacksmith shop.

President Smith reasoned, "Why buy all of our new motive power and rolling stock when we can build some of it ourselves, and more cheaply?"

LATE in 1905, the new shops began to assemble five Class H-23 Consolidations identical with the first H-23's sent to the road by Baldwin in 1903. The Baldwins, incidentally, had proved themselves so well in road tests that our management decided to make the class a standard freight-hauler. Baldwin, Rogers—and, in 1905, South Louisville—were given repeat orders for H-23's, more than 200 being built between 1903 and 1907, as well as another 100 similar but somewhat heavier 2-8-0-'s, from 1907 to 1911.

L&N's first five Pacifics, Class K-1, arrived from Rogers in 1905. With larger boilers and increased grate size provided by the trailing wheels, they reflected an obvious superiority in capacity and performance over the road's most ponderous 4-6-0's. Accordingly, in 1906, the year *Railroad Magazine* was born, and 1907, South Louisville Shops duplicated 40 more Pacifics, classes K-1 and K-2. The latter boasted piston valves, Walschaert valve gear, and even superheaters.

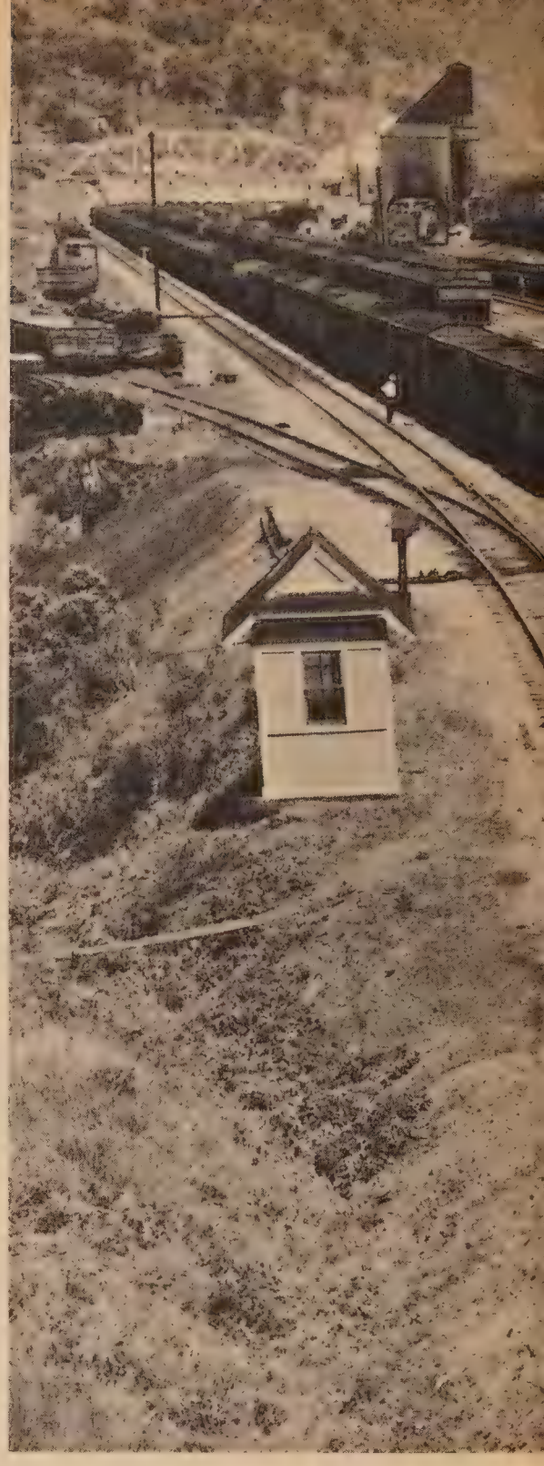
Then came the era of Millard Fillmore Cox and Ernest O. Rollings, great men who shaped L&N motive-power policy for two decades. Cox had gained valuable training as a draftsman with Richmond Locomotive Works. In 1911, shortly after he had testified in a lawsuit on behalf of L&N, he was called to Louisville and assigned to design locomotives for the increasing traffic.

Meanwhile, after hiring out to the same road as a machinist in 1894, the year of the Pullman Strike, Rollings climbed the ladder in 1910 to the position of master mechanic at South Louisville. Together, he and Cox translated their vast talents into nearly 300 new locomotives of four wheel arrangements. Cox's first design was for a huge new 2-8-0, Class H-28. In every respect—boiler and grate size, height, and weight—this type towered above all 2-8-0 predecessors. No. 1281, the first engine in that class, weighed 219,000 pounds, had 23½x30-inch cylinders, and exerted 47,000 pounds of tractive effort—more than 10,000 pounds above the next largest Consolidation's rating.

The H-28's straight-barreled boiler measured 80 inches in diameter; and whereas fireboxes on the smaller 2-8-0's extended back to the deck, offering a relatively small, narrow grate area, the H-28's firebox rode high over the rear drivers, providing 54 square feet of grate area.

In one of South Louisville's most productive periods (1911-'14), Rollings and his forces put together 25 H-28's and 69 H-29's. The latter class was a slightly heavier, more powerful modification of the former. Together, the two classes represented the L&N's ultimate development of the 2-8-0. They saw service over the entire system up to dieselization, after many had been rebuilt with stokers and larger tanks.

MEANWHILE, steel passenger trains called for more powerful engines, evoking a new Pacific, Class K-3, from the South Louisville drawing boards. The K-3's boiler was of the straight-barreled type, like the H-28's. It measured 71 inches in diameter, offering more



water heating surface than did the smaller tapered boilers of the K-2's.

Seventeen K-3's, built in 1912 and '13 were followed in 1914 by an improved version, Class K-4, which boasted a slightly lengthened boiler, enlarged cylinders, and outside journals on the trailing trucks. Boiler and grate sizes were otherwise identical, and most of the machinery—rods, link motion, driving boxes—were interchangeable with the earlier Pacifics built by South Louisville. In many respects the K-4 performed far better than the K-3. Forty-six of them rolled out of South Louisville to speed plush limiteds.

Early in this century, the L&N pushed lines deep into the coal-rich mountains of southeastern Kentucky, and by 1914 the black diamonds were

No. 1962, an M-1 Berkshire, starts train of empties on its way back to eastern Kentucky mines from DeCoursey yard in northern Kentucky, the last stronghold of steam on L&N. Note the coaling station in the background.

rolling from both Hazard and Harlan. A monster puller was needed to haul the coal drags to Louisville and Cincinnati gateways. Millard Cox's answer was a huge new Mikado.

The first lot in 1914-'15 consisted of 16 Mikes, Class J-1. They had 60-inch drivers, 27x30 inch cylinders with pistons protruding to the pilot beam, and a boiler twice as long as a 2-8-0's. Not handsome beside trim Consolidations or regal Pacifics, the J's earned their keep funneling black gold out of the mountains. All told, 96 new Mikes came from South Louisville shops between 1914 and 1921.

A few years after the J's had been introduced to the Cumberland Valley Division, one showed up in the roundhouse at Loyall, Kentucky, needing a mean driving-wheel tire changed. A tall, lanky machinist from nearby Pine Mountain sized up the Mike's ailment and started a hot fire to expand the tire for removal. While the tire was heating, he and his helper crawled lazily up into the cab for a swig of home-brewed mountain dew and a short snooze.

The pair slumbered for three hours, letting the tire and wheel center turn rosy red. Intense heat melted all lead in the counterbalance pocket, and when the hill boys awoke to remove the tire, lead poured out into the dirt roundhouse floor!

"Well, I'll swan!" exclaimed one, surveying the dilemma. Since it was easier to bury the lead than replace it in the wheel, the hill-billies did just that, applying the tire over the empty pocket. When the Mike went back in service, she began kinking up rail, and crews shied away every time they found her marked up for a run.

"Rollings sure put together one hell of an engine when he built this 1400," fumed Harry Feather, the master mechanic at Corbin, as he studied reports of the big engine's antics. Then, a few days later, someone found the missing lead buried at Loyall. The Mike was repaired and two alcoholic hill-billies joined the ranks of the unemployed.

The home-built power (including 34 heavy 0-8-0 switchers designed by Millard Cox in 1915) pleased the engine crews as well as company officials, but as World War I traffic swelled, more locomotives were needed. In late January, 1918, President Smith speeded up the delivery dates of new Pacifics then under construction in the shops.

"So the Old Man wants an engine in ten days?" snorted Ernie Rollings. "Well, we'll give him one in five."

Amid the clatter of shop machinery, the master mechanic huddled his foremen. They picked Pacific 238 as the first job for the accelerated program, and just to insure that the feat would be appreciated, Rollings assigned the shop photographer, Ernest Horn, to record every step.

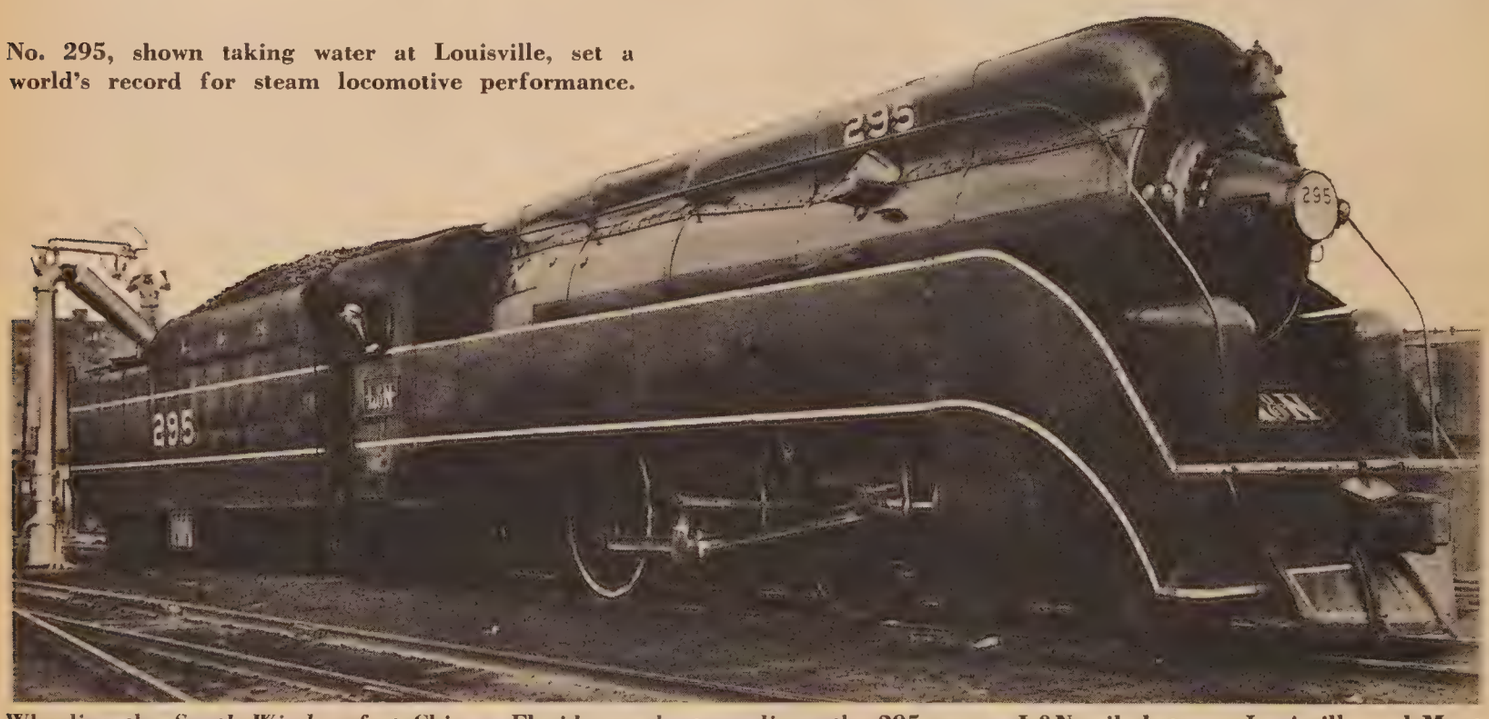
That was Monday morning, February 4th. Brawny machinists, boilermakers, and pipefitters swarmed about the engine's frame, cylinders, boiler, and firebox laying on the shop floor. Two days later, photographer Horn pictured industrious shopmen hammering on lagging, jacketing, air pumps, and piping; and on Thursday he shot an overhead crane dropping the partially finished Pacific onto her drivers.

At 11 a.m. Saturday he set up his tripod *outside* the erecting hall as steam was filling the boiler of a shiny new 4-6-2. Even then, the roundhouse boss wanted to know when she'd be scheduled out. To this day, South Louisville's record of fabricating the 238 in five days is hailed as one of the all-time greats in locomotive history.

STILL more power was demanded. In 1919 the USRA authorized the construction of 50 new locomotives by

More than 200 L&N "standard freight hogs" of the early 1900's, like this one (Baldwin, 1903), were turned out over five-year period by Baldwin, Rogers, and South Louisville Shops. Class H-23 2-8-0 was first engine built in the Shops.

No. 295, shown taking water at Louisville, set a world's record for steam locomotive performance.



Wheeling the *South Wind*, a fast Chicago-Florida coach streamliner, the 295 ran on L&N rails between Louisville and Montgomery, Ala., without stopping for coal and with only two water stops. According to data available to the Association of American Railroads, this 489-mile trip without fuel replenishment has never been equaled by steam power anywhere.

This 2-8-0, Class H-28, was the first engine designed by South Louisville Shops to roll from the Shops; the date, 1911.

Heavy Mikes doublehead redball freight high above Shelby Park, Nashville, Tenn., on freight-only cutoff. The lead engine, No. 1865, has an auxiliary water tank.

Passenger local with 4-6-2 No. 208 passes milepost 274.5 near Appalachia, Va.
Photographed by H. Reid on August 8, 1948

outside builders for The Old Reliable: six Pacifics, six 0-8-0's and 38 "McAdoos" of both light and heavy design. So well did these engines prove their worth on the home front that they were followed during the Roaring '20's by 285 more USRA-designed units of the 4-6-2, 4-8-2, 2-8-2, and 0-8-0 types. With the home-built power. they would reign until dieselization.

But for an untimely shopmen's strike in 1922, South Louisville might well have continued to build new power, developing its own designs or at least duplicating the outside-bought engines. As a result of the walkout, the railroad lost some skilled machinists. For many months afterwards, South Louisville morale was understandably low.

There were other reasons, too: rising labor and material costs, backlogs of repair and maintenance work, traffic fluctuations, and a change in management's thinking with the death of Milton Smith in 1921. At any rate, after the last order for the C-1 Class 0-8-0's had been completed, no new locomotives were ever built at South Louisville.

Instead, the shops were kept busy improving the road's 900-plus steamers. During the '20's and '30's they overhauled dozens of older 4-4-0's, 4-6-0's, 2-8-0's, and 0-6-0's, many getting new boilers, piston valves, and power reverse. Larger engines received stokers, mechanical lubricators, thermic syphons, feedwater heaters, and single-guide crossheads; and in 1940 the shops streamlined three Pacifics for Chicago-Florida streamliners. Also in the early 1940's, L&N developed an efficient overfire air jet system to improve firebox combustion and cut down black smoke. The big shops equipped nearly the entire locomotive fleet with this device.

South Louisville was one of the first shops anywhere to "slip-test" locomotives in the yard rather than break them in on the road. Previously, all newly shopped engines ran down the main line about 30 miles and back; but in the '30's, Jack Adams, Orris Reynolds, and some of the other boys figured out, with Rollings' encouragement, how the job could be done at the shops. If they could keep rails greased on a quarter-mile length of shop track, they calculated that a new engine's drivers could be slipped at wheel and piston speeds of 60 miles per hour while the locomotive herself barely crept along.

For the visitor at South Louisville, a gleaming new Pacific or Mike put on quite a show. First, hostlers mounted a small drum of oil on the pilot, then they adjusted hoses leading down to the rails for the oil flow to produce the right slippage. Now rods and drivers began to churn as the big engine opened up. Back and forth she ran, her exhaust ricochetting off shop buildings, until inspectors agreed she was ready for the main.

During the long grim years of World War II, South Louisville handled as many as 40 engines a month for class repairs. Smaller shops at Corbin, Paris, Etowah, Boyles, and Mobile also did some locomotive shopping, but the brunt fell upon South Louisville.

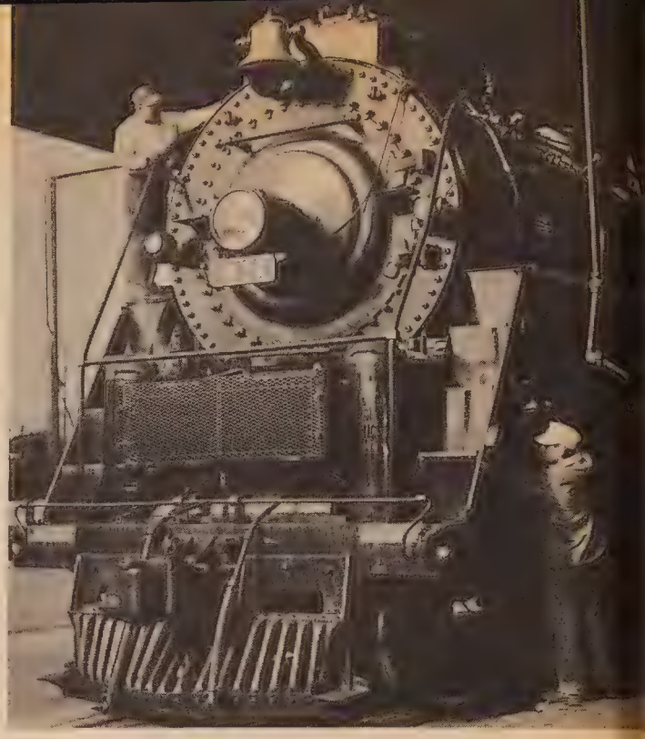
"We were turning out two locomotives a day," recalls Orris Reynolds, "and many a Saturday and Sunday I worked 40 to 50 men so we could meet our shopping schedules. Generally, I'd have six to eight engines in for new fireboxes, and about 20 for new flues. Another 14 or 15 were in to get Class 4's and 5's. Man, we *were* busy!"

Our last new steam locomotives were, in the minds of all those who knew them, also the road's finest. These were the 42 Class M-1 Berkshires, delivered by Baldwin and Lima between 1942 and 1949. Indeed, the final 22 M-1's were possibly the last large order for steamers by any American carrier.

MEANWHILE, although L&N served some of the nation's leading coal regions, its management had been flirting with internal combustion power for some time before committing itself to all-out dieselization. Two 660-horsepower switchers for the Louisville terminals were delivered in 1939, followed three years later by 16 EMD passenger units. But even then the management still had some faith in the traditional steam power, as shown by the orders for M-1's.

In 1947 we bought five EMD F-3's as helper units for a mean grade in eastern Kentucky; and when a strike shut down the mines in '48 the F-3's barnstormed

Piece by piece, the General was reassembled, the last steamer ever repaired at the South Louisville Shops. Photo shows her partly repainted, before being steamed up for test runs, to be followed eventually by far-reaching trips throughout the country. Note the radio-equipped diesel beside her.



Shopmen groom M-1 No. 1976. Prior to work on the *General*, this was the final steam engine to undergo major repairs at South Louisville. M-I's were L&N's final big steam splurge.

Three-quarters view of the 1976 as she looked in November, 1952, with total dieselization of the L&N only a few years away.

No. 152, Class K-1, one of L&N's first Pacifics, donated to Kentucky Railway Museum, Louisville, in 1957, is the only L&N steamer still extant, so far as is known. South Louisville built 40 identical passenger engines in 1906-1910.

over the rest of the system, staging an effective sales job for dieselization.

Steam power's doom was clinched in 1950 by an order for 181 diesel units. Next year the men at South Louisville sadly handled the shops' last class repairs on any steamer. In 1956 the fires were dropped for the last time from the only M-1 left in service, No. 1972. After that, no L&N steam was left except for a solitary Mikado, No. 1882, Class J-4, on lend-lease to the eight-mile Carrollton Railroad in Kentucky, and her time was fast running out.

It is interesting to note that the last runs of L&N and Pennsy steam locomotives were made on shortlines. The 1882 had her final fling on a snowy day, January 28, 1957, wheeling local freight from Worthville to DeCoursey. On that date she was swapped for a diesel switcher.

Since then the L&N has been fully dieselized. In 1959, when we ran a special train from Louisville to Nashville to mark the centennial of completing the main line, we borrowed a 4-8-2 from the Illinois Central to pull it, because the train needed a steam engine.

The only survivor of L&N steam power is a K-1 Pacific, No. 152, prominently displayed in the Kentucky Railway Museum at Louisville. There is, of course, the *General,* which L&N acquired when it took over the Nashville, Chattanooga & St. Louis in 1957. The South Louisville Shops restored her for a commemorative re-run of the Andrews Raid of April, 1862, and other runs and exhibitions thereafter. At this writing, the ancient 4-4-0 is on view at the New York World's Fair.

We on the L&N will never forget the glory of steam power. Even today, when the *General* rolls into South Louisville for minor repairs, word spreads quickly through the shops, "The *General's* back!" And as that historic relic, still in operating condition, rests in one of the erecting bays, flanked perhaps by modern diesels, oldtimers can be seen standing quietly beside her cab or drivers, wistfully remembering . . . ●

Scene is in waning period of Louisville & Nashville's great Steam Age: No. 2493 (Richmond, 1919) pops off, waiting for coal at South Louisville roundhouse. Auxiliary water tender sits between her and an H-29 2-8-0 taking coal at the right.
Photographed in 1949 by John B. Fravert

William S. Young visits Starrucca Viaduct; shakes hands with a pal, Shep; and reads H. Reid's *Extra West*, his first venture into hard-cover book publishing.

Interesting Railfans No. 23 BILL YOUNG

BILL is a one-man publishing house. He puts out an adult magazine for railfans entitled *Steam Locomotive and Railroad Tradition,* which is well illustrated and free of ads, and the popular *Short-Line Annual,* a guide to more than 400 little roads in the States and Canada. He runs this business under the name of Starrucca Valley Publications, P.O. Box 88, Starrucca, Pa. 18462. Last month we reviewed the first hard-cover book he has ever published: *Extra South,* by H. Reid, which we understand is selling well.

Unlike other publishers, six-footer William Simrell Young does just about all the work himself, to cut cost. No, he isn't married. (Girls, take note!) Bill is the top executive and board of directors. He is also the editor, assistant editor, makeup man, typesetter, proofreader, file clerk, publicity director, and office boy. While he is resting from these chores, Bill wraps and mails the publications and direct mail-order catalogs himself and takes care of such details as subscription records and correspondence. Some idea of the bookkeeping involved may be gathered from the fact that *Steam Locomotive* alone has more than 1700 subscribers, each of whom pays $4.75 for three large issues.

"One reason why my work is so satisfying," he says, "is that I know so many of my readers personally."

On top of all this, No. 23 is a commercial photographer, a designer of advertising material, and a railfan photographer. He shoots pictures, copies pictures, and custom-prints them, and occasionally *draws* pictures, for Bill is also an artist.

Even with this busy schedule, he finds time to assist with the preparation of exhibits for the Railroadians of America, of which he is a director, at the New Jersey Historical Society in Newark. He is also a charter member of the Susquehanna Valley Chapter of the National Railway Historical Society. Tom Taber, one of the Railroadians' founders, describes him as "a lone wolf operator who prefers to work for and by himself, without supervision or direction." Tom adds: "The ideas of others make little impression on him, since his mind is filled with his own ideas."

Bill was born in Brooklyn, N.Y., on December 30, 1928. His family tree includes several railroaders. A great-grandfather was a division master mechanic on the Lackawanna, and Bill has a "wildcat" order issued in 1869 to a train in his charge. Ten years before Bill was born, his father received a certificate of merit for assisting at the scene of the world's worst subway-train disaster, in Brooklyn just outside of Prospect Park, where a green strike-breaker had been used as a motorman and 97 persons were killed, many others injured. The name of Malbone Street, where the tragedy occurred, has since been changed to Empire Boulevard, *Railroad Magazine* told the story in its October '36 issue.

Like Bob Hess, No. 23 lives on a farm but is not a farmer. "The Erie's old Jefferson Division, now part of the Delaware & Hudson, runs through the middle of our farm," he tells us. "As a boy I came here for summer vacations and the trains fascinated me. The track is part of the grade over Ararat. I remember the D&H using four or five consolidations on a freight train and I vividly recall the excitement when 4-6-6-4's appeared here in 1940."

In that year, too, a Jersey Central engineer gave the lad some copies of *Railroad Magazine,* "which," says Bill, "made me a confirmed railfan."

One of those copies had a write-up of the 15-mile Rahway Valley Railroad and its master mechanic, Carl Nees. Bill became acquainted with Carl's son, Sharon, and occasionally rode RV engines or section cars with him. In 1941 Bill acquired a little Brownie camera and began his picture-taking career with shots of the Rahway Valley. Today he has about 5,000 negatives, 15,000 prints, and several hundred railroad books including *Official Guides,* Moody's and Poor's *Manuals, Equipment Registers,* and the like, plus a complete file of *Railroad Magazine,* since 1934.

"William S. Young is to shortlines what Arthur D. Dubin is to passenger cars: the ranking expert in his field," comments David P. Morgan, editor of *Trains.* "Moreover, he is a competent word craftsman as well as a human encyclopedia of Classes 2 and 3 railways. Of course, the shortline has always had its specific admirers, but these devotees tend to be provincial in their enthusiasm. Bill is the only man in the field, to my knowledge, who writes learnedly about the East Broad Top, say, *and* the Sumpter Valley; the St. Johnsbury & Lamoille County *and* the Frankfort & Cincinnati. I really shouldn't try to pigeon-hole him under the heading of shortlines because I respect his information on Class 1 roads also."

No. 23 weighs a slim 160 pounds, gave up smoking about two years ago, and keeps fit in summer by mowing the half-acre of terrace on the family farm and swimming in Starrucca Creek, and in winter by chopping wood and shoveling snow. He also does considerable hiking with his aunt's shepherd dog. The farm lies in a narrow valley, with the houses and barns against one mountain wall, D&H tracks beside the other. Bill's photo assignments often keep him busy evenings and Sundays.

"Most of my commercial photography has nothing to do with railroading," he says, "although I have done work for the D&H, the Erie-Lackawanna, the Reading, Alco Products, and a New Jersey public transportation group. Also, I have sold hundreds of

"Master and Machine": Reading T-1 and engineman.
Both photos on this page by Bill Young

8x10's to railfans across the country, in Canada, and even in Great Britain."

His favorite photographer is David Plowden, who has contributed many pictures to *Railroad Magazine*, including front covers. As Dave Morgan says, Bill is not a bad photographer himself.

"The railroad is a fascinating subject for photography," Bill comments, "Photography is one of the fine arts, and anyone who realizes that the opportunities go beyond the obvious and does something about it gets my applause—if he takes the trouble to learn the rules first."

Like most of us, No. 23 has found that research for articles usually consumes more time than the actual writing. "When I get into the writing stage," he explains, "I may eat, sleep, and drink the subject for several days.

The big hook: Delaware & Hudson wrecking crew at work on a pile-up which occurred near Starrucca, Pa., in January, 1963.

Erie-Lackawanna train chartered by Railroad Enthusiasts last May 9th enroute between Hoboken and Susquehanna makes photo run over the Starrucca Viaduct.

Both photos by William S. Young

Sometimes this means re-creating an environment I never saw. Effective writing requires that the reader be given a firm mental picture. If the author's own picture is not clear as he writes, there is no hope that the reader's will be."

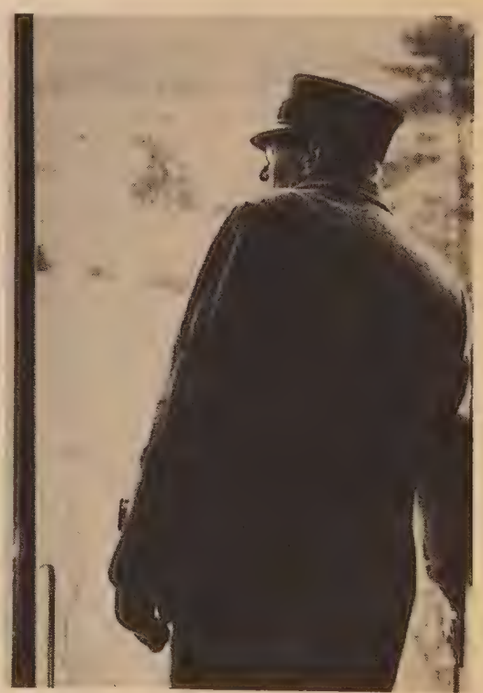
Bill is unduly sensitive to criticism but is basically good-natured. "My greatest wrath," he says, "is reserved for people who use others to achieve their own selfish ends."

Rail historian Walter A. Lucas writes: "Bill Young is an affable and well-grounded railfan. He corresponds with fans all over the country to keep up with what is going on."

He plunged into journalism at age nine by editing and pen-printing a neighborhood newspaper. Later, at various times, he put out mimeographed journals called *The Crown Sheet* and the *Short-Line Railroader*, which soon led him to more professional journalism. His well-edited *Steam Locomotive* came along in 1959. Every year since then he has been putting out the *Short-Line Annual*. At the Reading's request he wrote and published a 32-page soft-cover book, *Iron Horse Rambles & The Reading T-Is*. His publications, printed on a good grade of paper with low budgets, add much of value to railroadiana.

"Bill is a perfectionist in the finest sense of the word," enthuses Harold Lessersohn, president of the Railroadians, "and will not compromise the quality of his work, whatever the reason. Despite his devotion to rail lore, he can hold up his end in the almost lost art of conversation on such subjects as literature, art, music, architecture, and American history."

His rural home is located ten miles from the 116-year-old Starrucca Viaduct. The Erie-Lackawanna's eight-mile grade to Gulf Summit runs east from Susquehanna, a division point, over that viaduct. Last July he took some pictures of a serious train wreck in the shadow of this famous old structure. ●



Last D&H passenger train between Albany and Binghamton in January '63 was also this trainman's last run. He retired at the end of the trip.

HOW MUCH CAN A DIESEL PULL?

by Bert Pennypacker

The nine new Alco diesel units delivered to the Delaware & Hudson last April are Century 628's, the first digit meaning six motors while the "28" is an approximation of the 2750 horsepower. All nine are restricted to the Pennsylvania subdivision running between Oneonta, N.Y., and Wilkes-Barre, Pa. William S. Young made this shot of some of them at Ararat summit, not far from his home.

THE FUNCTIONS of horsepower and tractive effort in the operation of diesel-electric locomotives can be explained by comparing 1500 and 2500-hp. units. Both are nearly equal in weight and tractive effort and can pull identical loads. But the 2500-hp. job packs an extra punch to achieve faster speed with the same trailing load. In other words, weight and tractive effort are used mainly in starting and in heavy pulling at slower speeds, while faster service requires greater horsepower.

Normal starting tractive effort of a locomotive is 25 percent of the weight on the driving wheels. Once under way, it changes with each mile-an-hour of speed, decreasing as the momentum increases. To find the tractive effort at any given speed, simply multiply diesel-engine horsepower by 323 and divide the result by miles per hour. Note that all of the figures and formulas specified here are general averages for easy computations. Exact TE at any given time is based upon three factors: rail-adhesion conditions, wheel diameter, and gear ratio. Starting TE can vary from 10 to 36 percent of the weight on drivers.

The advantages of weight and TE drop sharply above 15 to 20 mph. and horsepower becomes more important. This means also that four- and six-motor locomotives of identical horsepower are nearly equal in pulling power above 20 mph. The horsepower requirement of a train depends upon the maximum speed desired. Its basic formula is total resistance (in pounds per ton of train weight) multiplied by miles per hour, divided by 375. The horsepower at a locomotive drawbar is computed by first deducting an average transmission efficiency loss of 14 percent from the diesel engine's rated horsepower and then using the basic formula for the locomotive only, and deducting that result from the adjusted hp. figure.

Horsepower and tractive effort are used to overcome the elusive factor of resistance. While the locomotive is basically pulling a train weighing a given number of tons, it is also overcoming resistance created by air, track curvature, and grades, by wheel flanges and journals, and even weather temperatures, which affect the grease in journals. Resistance is tremendous at starting and then drops off very sharply, after which it rises slowly as speed increases. Strangely enough, heavy cars are easier to pull, ton for ton, than light ones.

Average starting resistance on straight and level track may be figured at 25 pounds per ton of train weight. When starting or moving up grades, add 20 pounds per ton for each one percent of grade. Each degree of track curvature also adds one pound of resistance per ton. Here are some examples of rolling resistance in pounds per ton of car weight on straight and level track:

mph.	20 tons	50 tons	80 tons
5	7.3 lbs.	3.8 lbs.	3.0 lbs.
20	8.8 lbs.	4.9 lbs.	3.9 lbs.
40	12.3 lbs.	6.8 lbs.	5.4 lbs.
60	17.0 lbs.	9.5 lbs.	7.4 lbs.

A train must be powered so that the locomotive overcomes starting resistance, surmounts the stiffest grade along the route, and attains the desired running speed. Drag freight requires far less hp. per ton of train weight than hotshots. To find the horsepower needed for a desired tractive effort at a given speed, multiply miles per hour by the desired tractive effort and divide that result by 323.

Thus tractive effort, horsepower requirements, and resistance change continuously with each mile an hour of speed and with every curve in the track. Dynamometer cars record exact performance figures. But the foregoing data enables even amateurs to compute close averages with pencil and paper. A final tip: be sure to allow for locomotive resistance when figuring tractive effort, and the same goes for drawbar horsepower. ●

ASK BARBARA: Railroad questions are answered here by our research expert—as many as space permits. Top priority is given to subjects of general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York, N. Y. 10017. No replies are sent by mail.

1 *When did early railroads start using passenger tickets?*

About 1840, according to W. E. Norton, the Canadian National's chief of tariff and ticket bureau. Prior to that time, he says, passengers' names were entered on a waybill similar to those now used for freight. As traffic developed, coins were tendered for railway journeys and this practice lasted until the "invention" of tickets.

2 *Tell me about New York's South Brooklyn Railway.*

Popularly termed "the Toonerville freight line," the SB runs for 6½ miles, starting along the Brooklyn waterfront in the Bush Terminal area and winding up at Coney Island. Owned by the city and operated by the New York City Transit Authority, it is the world's only freight railroad that runs through subway tunnels and on old streetcar tracks.

Its roster boasts three diesels, all bought second-hand, but no freight cars. It uses some NYCTA flats and other freight cars. One diesel is lettered SB, the others NYCTA, but NYCTA ownership of the line is only technical. Top official on the line is George F. Preiss, freight traffic manager, one of 11 employes, who started with the SB as an office boy in 1926, when it was dubbed the SoB Railway.

Since 1910, the little pike has shown a profit practically every month. It carries freight received from all over the United States which has been floated on barges from New Jersey piers to its busy Brooklyn yards. Each train is pulled by a diesel over its first half-mile of surface track—ex-trolley rails—then the diesel is switched around to *push* the cars up the grade through a mile-long tunnel. Operation is usually from 10 a.m. to 4 p.m. daily except Sunday.

3 *What was the basic objection to old-style stub switches?*

They wore out too soon, did not line up properly, and often put rolling stock on the ground, so the present split switches replaced them in the early 1900's. But split switches are not entirely satisfactory, either. It is difficult or impossible to operate them during heavy snow or ice without track heaters, the installation of which is not always practicable.

Because of the limited number of track laborers available nowadays, some thought is being given to a new version of the old switch. At St. Paul, which has lots of snow, the Minnesota Transfer, a terminal line, is trying out a modernized type of stub switch which has better wearing qualities and protective guards. So far it has performed well, reports *Railway Track and Structures,* with no need for sweeping away or melting the snow.

4 *Chatsworth wreck details, please.*

This railroad disaster, one of America's worst in the number of casualties, occurred on the night of Aug. 10, 1887. The Toledo, Peoria & Western had advertised a low excursion fare to Niagara Falls and was soon sold out. The special left Peoria, Ill., at 8 p.m. with 16 cars doubleheaded by engines 2 and 15.

Just beyond the town of Chatsworth, Ill., Engineer Colfax Sutherland of the lead engine, No. 2, and his fireman, John Rogers, saw what appeared to be a trackside brush fire near a shallow stream. There had been several such fires that hot dry summer. Seconds later they realized with horror that the trestle itself was burning. Sutherland reversed his engine and whistled for down brakes, hit the blazing span at an estimated 35 miles per hour, and crossed safely. The trestle collapsed under the second engine, which took nine cars into the shallow draw. Sutherland highballed at top speed to the next town for aid. Eighty-two persons were killed, many others injured. Further details may be found in two books: *Down Brakes,* by Robert Shaw (1961), and *Railroad Avenue,* by Freeman Hubbard (1945).

"During World War II," recalls Claude Blount, Kansas City, Mo., "while firing on the TP&W, I crossed that culvert many times. There is no longer a creek at that point."

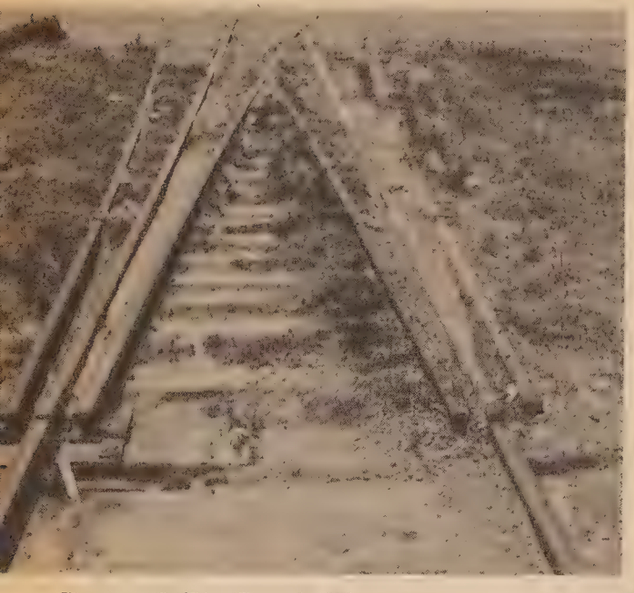
A song entitled "The Chatsworth Wreck," author unknown, is reprinted here. It states incorrectly, "a hundred lives were lost."

From Peoria, town and hamlet,
There came a joyous throng
To view the great Niagara;
In joy they sped along,
The maiden and her lover
The husband and the wife,
The merry, prattling children,
So full of joyous life.

(Chorus)

But Oh! how much of sorrow,
And Oh! how much of pain
Awaited those who journeyed
On that fated railway train!

INFORMATION BOOTH



Denver & Rio Grande Western: stub switch on Manitou branch and an old tank at Grand Jct., Colo., temporary source of water for diesels and passenger trains.
Both photos by R. P. Parsons, P.O. Box 61, Arvada, Colo.

Old Rutland Railroad ticket office at Shelburne, Vermont, is now one of 33 buildings that comprise the outdoor Shelburne Museum of early Americana. Ben Parker (left), long since retired, used to work for the Rutland at the same telegrapher's desk he is shown occupying. The other man, Frank Wildung, supervised the restoration of this real Victorian depot.
Einars J. Mengis, staff photographer, Shelburne Museum, Inc.

With hand upon the lever
And eye upon the track,
The engineer was standing
While the shades of night grew black.
They passed the town of Chatsworth
And rushed into gloom;
Oh, could some power have saved them
Ere they reached their doom!

For those smoldering embers
That lie along the ridge;
Oh, God, in pity save them;
It is the railroad bridge!
Too late to turn the lever,
Too late to stop the train,
Too late to soothe their sorrow,
Too late to soothe their pain!

A mighty crash of timber,
The sound of hissing steam,
The groans and cries of anguish,
A woman's stifled scream.
The dead and dying mingled
With broken beams and bars,
An awful human carnage—
A dreadful wreck of cars.

All honor to the hero
Who the flame and fury fought
All through the night of horror,
An honor deadly fraught,
As over land and water
The thrilling message crossed:
The bridge was burned at Chatsworth
And a hundred lives were lost!

5 *Which roads were merged into the Pittsburgh, Bessemer & Lake Erie (now Bessemer & Lake Erie)?*

The PB&LE was incorporated Dec. 22, 1896, in Pennsylvania and Ohio. It consolidated with the Pittsburgh, Shenango & Lake Erie for 999 years from April 1, 1901. The Meadville, Conneaut & Linesville, chartered 1891, was leased to the PB&LE for 99 years. The B&LE, which assumed that lease, was chartered Dec. 31, 1900, and completed in 1901. U.S. Steel Corp. now owns most of its capital stock and operates the line.

6 *What are "high-cube" cars?*

Cube in this case means cubic feet. Ford Motor Car Co. asked the Wabash Railroad for a larger capacity boxcar to transport auto parts. Experts of various railroads got together with carbuilders and shippers and designed a car 94 feet long (over coupler faces) and 17 feet high above the rail, with 10,000 cubic feet capacity or a normal capacity of 70 tons. This car has a cushioning device, roller-bearings, and two 20-foot double doors on each side for autos of General Motors and one door for Ford and Chrysler cars. Thus far 28 carriers have ordered them; eventually 5,000 may be built. It is a good example of cooper-

ative effort for more efficient railroading in the United States.

7 *What colors were New Haven diesels painted in the 1940's before the present color scheme was adopted?*

Sy Reich tells me that New York, New Haven & Hartford cab and booster units originally were painted dark green with yellow (or gold) striping. Road switchers and yard switchers were orange and dark green.

8 *Describe the mechanism and operation of the owl-faced, two-position, home-and-distant, color-light signals used on the Hudson & Manhattan.*

These are the original signals installed between Hoboken, N.J., and 33rd Street, New York, in 1907, the year after the birth of *Railroad Magazine,* when it was considered impracticable for relays to switch the large amount of power needed for carbon-filament lamps. Instead, the lamp was kept burning continuously, and a shutter, hinged like a door, was linked to an electro-magnet. If the block ahead is occupied, the shutter cuts off the light from the green roundel and illuminates the red roundel. But when the block is clear, the track relay energizes the magnet which swings the shutter to direct all the light to the green roundel.

The red and green roundels are side by side near the top of the signal housing. Below this is the distant unit, identical except that a yellow roundel is used instead of a red one. The aspects are: *red-over-yellow,* stop; *green-over-yellow,* proceed, prepared to stop at next signal; *green-over-green,* proceed. Most of these signals have been replaced by conventional color-light signals in which each roundel has its own light bulb lighted as selected by relays. (Henry T. Wilhelm, an electronics engineer, supplied this information.)

9 *I have often read of fires caused by lighted cigarettes dropped on railroad ties, one of the costliest being on a trestle of what was once the Long Island's Rockaway line, now in New York's subway system. Why aren't ties fireproofed?*

Many are, especially on bridges and trestles. Texaco manufactures a liquid cement that, sprinkled with gravel, fireproofs ties for a few cents apiece. The ads say "this rugged asphalt-asbestos material seals out water, protects against rotting, splitting, frost-cracking, prevents tie-burning even under fuses or showers of brake-sparks" and that one coat lasts 5 to 8 years.

10 *A brief history, please, of Adams and American Express companies.*

All express companies in the United States trace back to William F. Harnden, who began carrying "express" packages, newspapers, and mail in a carpet bag March 4, 1839, between Boston and New York via the Boston & Providence Railroad and Long Island Sound steamers. The idea soon caught on. Adams Express Co. was formed in 1840, American Express Co. in 1850, Wells, Fargo & Co. in 1852, and then the famous Pony Express and others. All were unified in 1918 into the Railway Express Agency.

In 1929 the name was changed to American Railway Express Co. In 1958, when a large group of railroads bought the company, New York Central gave notice that it would withdraw, which would have been a serious blow to the service, but cancelled its notice when the company was reorganized and modernized and the words air express was added. Today the huge organization serves all 50 states. The REA trademark was adopted in 1960.

"O Lord, now that I have flagged down, lift my feet from the rough way of life and plant them safely on the top deck of the train of salvation. Let me use the safety lamp known as prudence and make all the couplings in the train with the strong link of love. Let my hand be the Bible. And, Heavenly Father, keep all switches closed that lead off on sidings, especially those with a blind end.

"O Lord, if it be thy pleasure, have every semaphore block along the line, show the white light of hope, that I may make the run of life without stopping. And, Lord, give us the Ten Commandments for the schedule.

"And, when I have finished the run on schedule time, and pulled into the great dark station of death, may the Superintendent of the Universe say: 'Well done, thou good and faithful servant. Sign the payroll and receive your check for eternal happiness.' "

13 *How many circus trains are now being operated in the U.S.A.? What kind of dining car does each have?*

The world's only circus-owned train belongs to Ringling Bros. and Barnum & Bailey, which still uses the old B&B slogan, "Greatest Show on Earth." Consisting of 19 cars pulled by diesel power, it averages 20,000 miles a year in 20 states. In the early 1900's more than a dozen trains were owned and operated by various circuses. Today one of the smaller shows, such as the Shriners' Circus, may charter a train occasionally for a single round trip, but the cars remain the property of the railroad over which it runs.

The "Greatest Show" now has on its payroll 350 performers, 175 other people. In its Golden Age it boasted 2,000 employes, plus a big top with all the paraphernalia that went with it, and a gigantic herd of 55 elephants. Hannibal had only 41 elephants when his army crossed the Alps to invade Rome.

At its peak Ringling-B&B owned a

"Do-it-yourself" 70-ton coal hopper "car kit." The Baltimore & Ohio is getting 3,600 of these from Bethlehem Steel's Johnstown, Pa., car shops. The railroad assembles the cars at its own shops in DuBois, Pa. Each hopper, because of its high-volume and lightweight design, can actually carry over 80 tons of lading.

11 *Who built most of the Pennsy's electric multiple-unit coaches, and when, and how many are operated today?*

The railroad itself or American Car & Foundry, Budd, Pressed Steel, or Standard Steel built them all. General Electric, Westinghouse Electric, and American Brown-Noveri supplied the electric equipment. The PRR presently operates about 500 MU motors and trailers. Most of the cars were built originally as passenger coaches between 1910 and 1914 and converted to MU's in 1915, 1917-'28, 1930-'37, and 1950. (Thanks, Sy Reich, for this answer.)

12 *Do you have the words of the old "Railroader's Prayer"?*

Yes, right here, author unknown.

100-car train and operated it proudly in four sections. None of those sections had a regular diner but served snacks. The circus fed all its 2,000 employes, roustabouts as well as stars, elbow to elbow, in a huge tent, which was pitched as soon as the first section reached town. Today's lone circus train has a diner known as the "pie-car," which serves meals around the clock—except between 2 and 3 a.m., while it is being cleaned and while most of the personnel are asleep. There are 25 stools at the counter and booths seating 35.

The pie-car has an open kitchen, with gas and electric appliances, and its staff includes a waitress. (A waitress on rails is a novelty. No other train in North America, except the C&O's Pere Marquette streamliners, uses any waitresses, although a very few have counter girls in cafeteria cars.) Willis Lawson, who runs the pie-car, says circus people are especially fond of corned beef and cabbage, stew, meat loaf, goulash, and a potato-dumpling dish served with a tossed green salad.

Dixiana Shay, historic 1895 narrow-gage engine of the Roaring Camp & Big Trees Railroad, heads the West's last regularly scheduled steam passenger train up a steep grade toward Big Trees depot near Felton, Santa Cruz County, California.

Running Extra

"Is any town in continental U.S. served by a rail line but no good highway?" asks John Zacho, 2332 Stillwater Ave., St. Paul, Minn. 55119.

These questions come from S.E. Whitman, Marshall St., RFD., Norfolk, Mass.: "During the era 1870-'80 what colors did the railroads paint their boxcars, cattle cars, flats, and coal cars? Did the various roads have their own colors or was the dark red of later years in common use during the '70's, and were heralds painted on freight cars? Also, who can tell me what kinds of membership cards and/or buttons were issued by the rail unions or brotherhoods in those days?"

"One of Lucius Beebe's books says the Southern Pacific *Del Monte Limited* was instituted April 28, 1889," writes Jeff Wetmore, 330 51st St., Oakland, Calif. 94609. "Is it the oldest train west of the Rockies? Which American trains, if any, or older? I understand that the *Del Monte* has the last news-agent service left on any SP train: is that true?"

Answers to questions from two readers which appeared in *Running Extra* come from J. Buckley, 5824 W. 28th St., Cicero, Ill. 60650: (Mike Varney) "Santa Fe is still using a few motor cars in freight service out of Wellington, Kan., and M-190 is still on the Clovis-Carlsbad, N.M., run. The Burlington also has a few motor cars in freight service, out of Beatrice, Neb., and Macomb, Ill., plus others."

D.R. McCulloch) "A complete New York, Ontario & Western disposition list is in Aug. '63 issue of *Locomotive Notes,* published by Roy Linscott, Jr., Box 341, Natick, Mass.; $1 per year."

Elaborating on our comments about American railroad employes wearing uniforms while on duty, L.W. Penningroth, vice president of the Illinois Central Employes' Service Club at East St. Louis, Ill., writes:

"Some agents on the IC's St. Louis Division in both large and small stations dressed just like passenger conductors, with long-tailed coats, except that the metal gilt letters on their uniforms spelled 'Agent.' Around the turn of the century they wore square-peaked caps, but in the mid-1920's or a bit earlier they switched to round-billed caps. For example, Mike Moffet, the IC agent at Pinckneyville, Ill., wore a uniform cap, trousers to match his long-tailed coat and vest, white shirt, black tie.

"According to a previous issue of *Railroad Magazine,* Northern Pacific agents at one time were required to wear uniforms, and a tailor was sent out over the system to measure them for new outfits. At one station the agent turned out to be a woman."

A new 4-page illustrated folder describing automatic control of hump locomotives in freight-car classification yards is available from General Railway Signal Co., a Unit of General Signal Corp., Rochester 2, N.Y.

The world's first fiber-glass locomotive is being put into service on the Czechoslovak State Railways. This engine, turned out at the former Skoda works in Pilsen, took only half as long as the conventional locomotive to build and weighs only half as much. Plans call for building 20 more this year.

Again bringing up the subject of entrance-exit interlocking machines: David Graeff, Box 60, RR 2, Fayetteville, Pa., writes: "One of the latest and most interesting of these machines, at New Haven, Conn., controls all traffic on the New Haven Railroad between Cedar Hill Yard and Shore Line Jct. through the station to West New Haven. This machine replaced several widely scattered towers in the area. The first installation of this type was on the model railroad of the New York Society of Model Engineers, which was then located near Times Square in New York City. I believe Carlos Smith was responsible for its installation."

Information on compressed-air locomotive is wanted by Otto Weiss, 35-52 34th St., Long Island City, N.Y. 11106. He says this subject has never been covered adequately in *Railroad Magazine* or any other periodical he has seen.

Correcting a printed statement, Ron Morse, 893 Linda Vista, Banning, Calif., says the Silverton is only part of the Rio Grande's still-remaining narrow-gage mileage. Other major roads which still use a little steam power are the Reading, CB&Q, and Canadian National, reports Thomas G. Morad, Jr., 12 Irvin Ave., Collingswood, N.J. 08108. The CN recently shopped its 6218, a 4-8-4, to replace her sister 6167 on occasional railfan trips.

"In your June issue Elliott Kahn described the Snaefell Mountain Ry. as 'an adhesion line with 3rd rail cog (rack) braking on down track'," writes Ara Mesrobian, 7410 Connecticut Ave., Chevy Chase, Md. 20015, "whereas it uses the Fell system of extra adhesion on both up and down tracks."

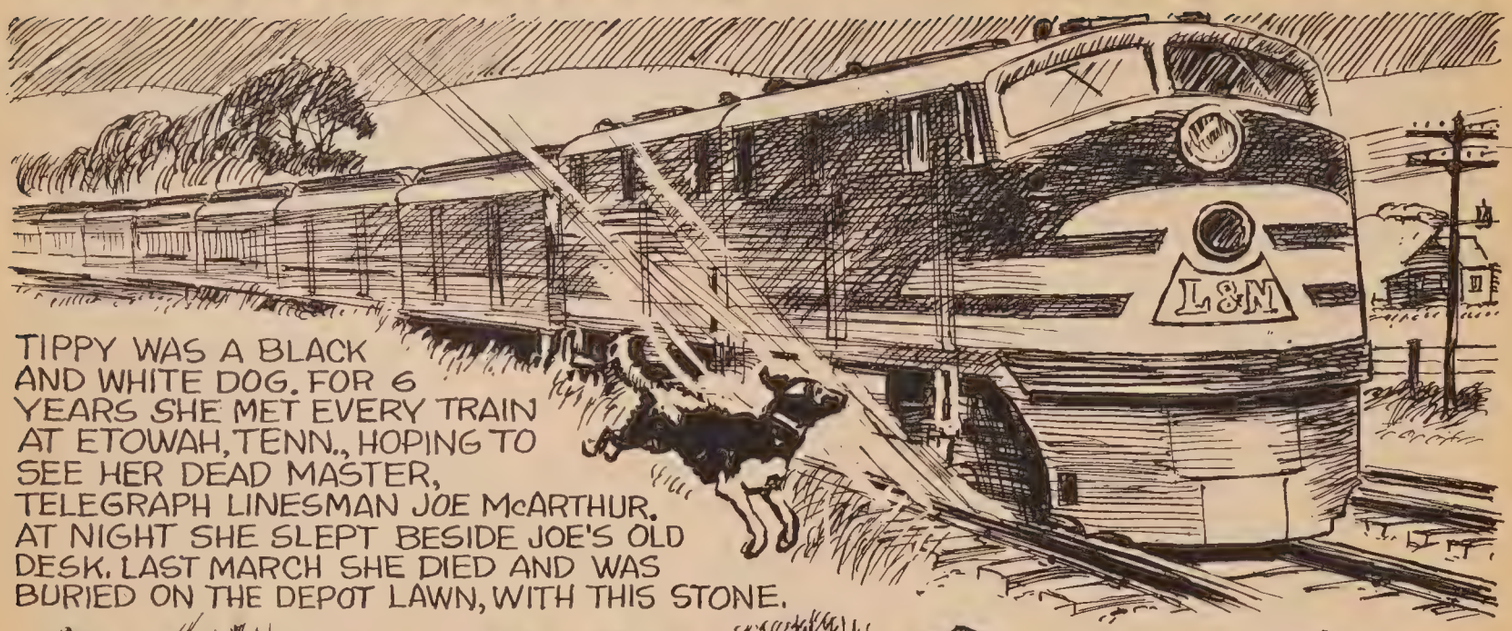
The Light Railway Transport League of London, England, published a book on that line, by F.K. Pearson, which includes the following explanation:

"The Fell system may be regarded as an alternative to rack and pinion propulsion on steep gradients, and consists of an additional doubleheaded rail laid on its side between the running rails, so that additional traction and braking may be obtained by using the two extra rail surfaces thus provided."

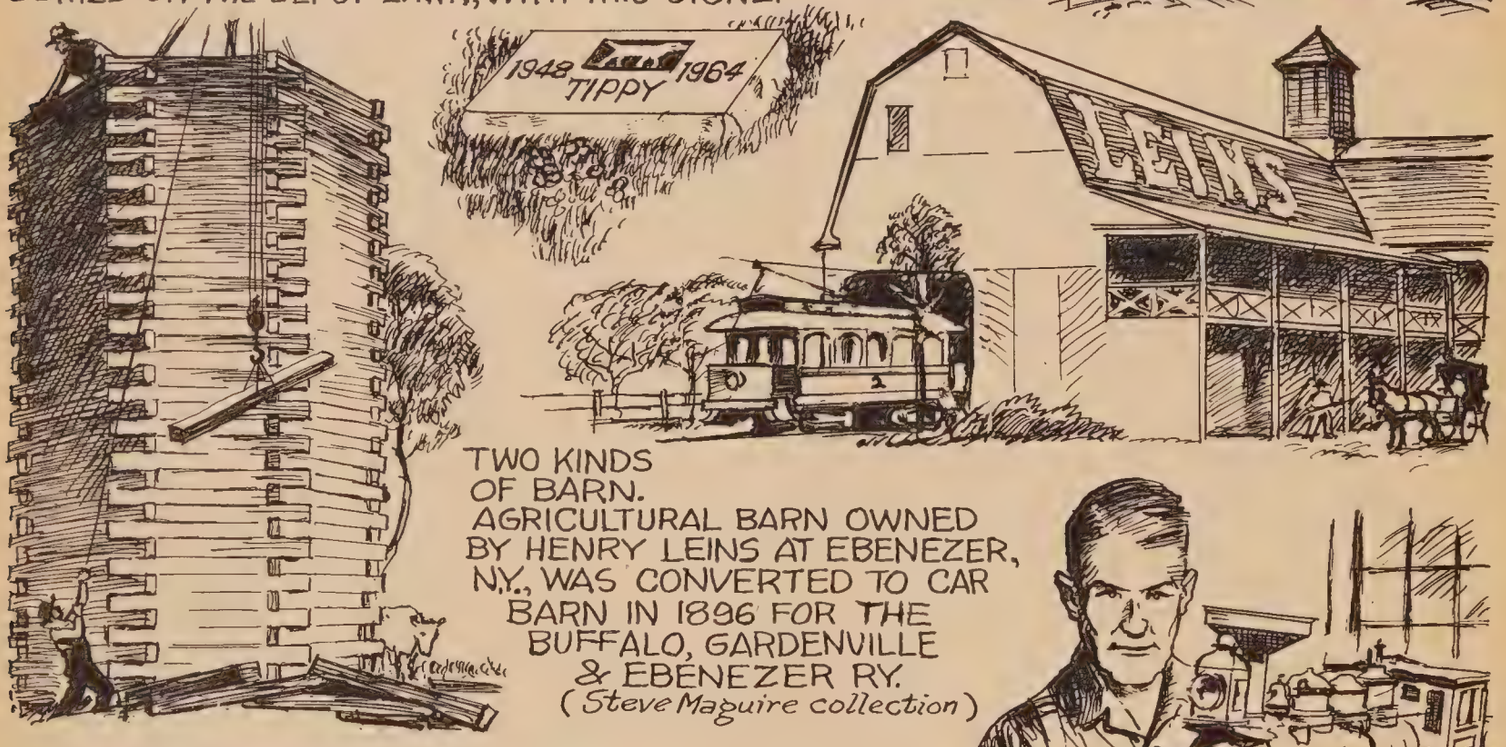
"The Fell rail at Snaefell is thus essentially a safety device, not taking any actual drive but effectively preventing any derailment, which on a mountain line might have serious consequences. Each bogie carries at its inner end a pair of horizontally mounted flanged wheels, which run on either side of the Fell rail with their flanges bearing against its underside. . . ."

ALONG THE IRON PIKE

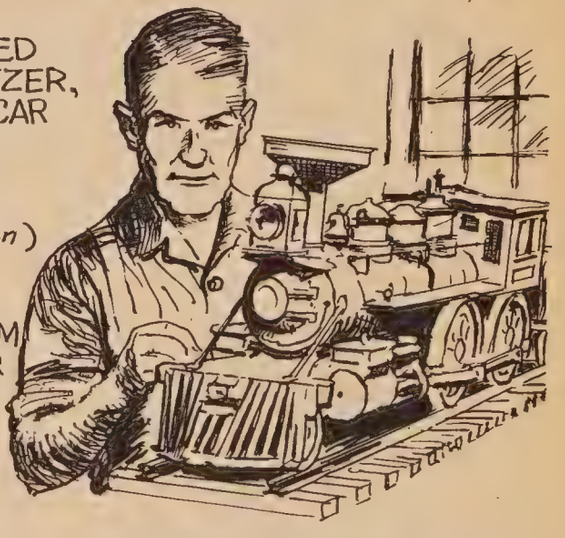
by Joe Easley



TIPPY WAS A BLACK AND WHITE DOG. FOR 6 YEARS SHE MET EVERY TRAIN AT ETOWAH, TENN., HOPING TO SEE HER DEAD MASTER, TELEGRAPH LINESMAN JOE McARTHUR. AT NIGHT SHE SLEPT BESIDE JOE'S OLD DESK. LAST MARCH SHE DIED AND WAS BURIED ON THE DEPOT LAWN, WITH THIS STONE.



TWO KINDS OF BARN. AGRICULTURAL BARN OWNED BY HENRY LEINS AT EBENEZER, N.Y., WAS CONVERTED TO CAR BARN IN 1896 FOR THE BUFFALO, GARDENVILLE & EBENEZER RY. (*Steve Maguire collection*)



SILO 30 FEET HIGH WAS BUILT FROM OLD NORTHERN PACIFIC RR. TIES BY LAWRENCE LARSON ON DAIRY FARM IN GRAYS HARBOR COUNTY, WASH. AS EVERY FARMER KNOWS, SILOS ARE USED TO STORE GREEN CORN FOR CATTLE FEED. (*from Walt Thayer, Seattle, Wash.*)

THE ONLY 4-4-0 CAMELBACK THE LEHIGH & HUDSON RIVER EVER HAD WAS BUILT BY BALDWIN IN 1906. THE YEAR OF RAILROAD MAGAZINE'S BIRTH, AND WAS SCRAPPED IN 1928. (*Collection of Warren Stowman, 2102 Eastburn Ave., Philadelphia, Pa.*)

WOODEN WOODBURNER: REPLICA OF OLD CANADIAN PACIFIC 4-4-0 *COUNTESS OF DUFFERIN* WAS MADE BY CPR ENGINEMAN TOM SCOTT, OF WINNIPEG, FROM 4800 PIECES OF BIRCH AND MAPLE, HAND-TOOLED AND POLISHED. EVEN THE TINIEST DETAILS ARE ACCURATE. (*The Spanner, CPR Magazine*)

Steve Maguire's TRANSIT TOPICS

FEDERAL grant of $1,333,333 has been approved by Robert C. Weaver, Housing Administrator, for the San Francisco Bay Area Rapid Transit District to assist in financing extensive field tests of the relative merits of AC and DC for transit vehicle propulsion. Total cost of the testing program is estimated at $2 million, of which the District will provide $666,667 to match the Federal grant under the Mass Transportation Demonstration Program.

Steve Maguire

Ground was broken last summer for the construction of rapid transit lines on opposite sides of the United States. At this writing, work is being pushed on the Bay Area's high-speed, electric-train network which will get the Federal grant as well as on the Kirkwood project in New Jersey.

Ceremonies at Camden, N.J., on June 11th marked the beginning of actual work on the new line that will cross the wide and deep Delaware River to connect Philadelphia with southern New Jersey. Participants included officials of the two states, of various cities and towns, and of the Delaware River Port Authority. Some 10½ miles of trackage were sold by Pennsylvania-Reading Seashore Lines for this project. Third-rail cars will run over Benjamin Franklin Bridge to a terminal at 16th and Locust Streets, Philadelphia. Target date for completion is July, 1967. Cost is estimated at $62 million.

Eight days after the Camden beginning, President Lyndon B. Johnson set off a dynamite blast to start the construction job at Concord, Calif., writes Harry Demoro, 330 Haight Ave., Alameda, Calif. This launched work on the Diablo Test Track, a 4-mile experimental line between Concord and Walnut Creek that will follow exactly the Sacramento Northern's abandoned interurban route.

Eventually, a 75-mile transit system of 5′ 6″ gage will connect Fremont, Oakland, Richmond, Berkeley, Concord, Walnut Creek, Daly City, and San Francisco. First operation is set for 1968; the entire system should be ready by 1971.

The test track should be ready for use by next May. Plans call for testing three cars. Various truck designs, motors, and control systems will be placed on the "rolling laboratories" to be built by Budd Car Co. and should be in operation next March. Engineers also will test new methods of reducing train noise in addition to rail shapes and ties. The system will feature:

A 4-mile tube beneath San Francisco

Reminding you of Gulliver and the Lilliputians, Miss Sue Gibson hovers over a model of the Transit Expressway, a one-mile prototype of which Westinghouse Electric is building in Pittsburgh, Pa. Elevated line will operate lightweight automated cars of 28-passenger capacity, singly or in trains, on its own right-of-way, with service every two minutes around the clock at 50 mph. maximum speed, as an experiment to test the new type of transit system designed specifically for medium population-density urban areas. (Below) Full-size mock-up of one of the cars.

Until recently, this electric loco and others switched for Oshawa Ry. in Canada
T. G. J. Gascoigne, Darlington Blvd. S, R.R. 4, Oshawa, Ont., Canada

Bay to carry the trains between Oakland and San Francisco. State toll bridge authority revenues also will be used to finance this, the world's longest underwater tube.

Computer-controlled cars. No crews. A centrally-located computer will guide all movements, will space the trains, and regulate speeds.

Average speed, including station stops, of 50 miles per hour. Top speed at least 80.

Automatic fare collection. Commuters will insert plastic credit cards into turnstiles and will be billed once a month.

Completely grade-separated right-of-way. Subways will be built in Oakland, San Francisco, and Berkeley. The first two subways will be two-level. In San Francisco, the top level will carry Municipal Railway streetcars and will connect with the existing Twin Peaks trolley tunnel.

The entire network will be operated by the rapid transit district, a local agency covering Alameda, Contra Costa, and San Francisco counties.

No. 2 of the Cement Company line, abandoned a few months ago, is shown leaving the Mexicano Railway station in Puebla, Mexico, for a two-mile run to the plant.
F. Thomas Walsh, 28 Home Rd., Hatboro, Pa.

Street-sprinkler (*netezza urbana*) IV, photographed near U.S.-Italian joint airport in Naples, Italy, by George Monohan, Lt. Comdr. M.C., U.S.N., U.S.S. *Lake Champlain* (CVS-39) c/o Fleet Post Office, New York, N. Y.

MONTREAL'S new subway, the *Metro,* is being built as fast as possible to have it operating by April, 1967, when the city's World Exposition will open, writes Robert Robinson, 1285 Lepine St., Saint Laurent, P.Q., Canada.

Tunneling there in solid rock presents fewer engineering difficulties than did the sand and soft subsoil found in building Toronto's subway. It is estimated that the 15-mile Montreal line will cost only $200 million, while the 14.6-mile Toronto underground cost $265 million. Because Montreal will be lighter, smaller, and rubber-wheeled cars, its tunnels will not be as wide as Toronto's.

Elsewhere in Canada, the Oshawa Railway of Ontario officially ceased operating May 1st at midnight, laments T. J. Gascoigne, Darlington Blvd., Oshawa, at which time Canadian National GS-8 diesels took over all main-line duties.

At least one electric loco remained in operation till June 27th, however, due to the City of Oshawa's delay in signing an agreement for CN diesels to use Oshawa tracks. Oshawa line-car 45 was slated to go to Halton County Museum at Rockwood, Ont., while some U.S. museum (we don't know which one) reportedly has bought sweeper 22.

A HORSE-CAR of the Milwaukee Railway Co., built about 1860, broke an axle while rolling through Milwaukee last July 4th in a parade of the Ringling Bros. and Barnum & Bailey Circus, reports Jim Scribbins, 155 N. 79th St., Milwaukee, Wis. 53213. Six policemen,

two sailors, and two bystanders shoved the old car out of the way and a tow-truck ingloriously hauled it off.

CONSTRUCTION is now under way on the first of PATH's 162 new aluminum, air-conditioned cars for use in the Hudson Tubes between Manhattan and New Jersey. The work started in the plant of the St. Louis Car Division of General Steel Industries. The first three cars are scheduled to be delivered in late November, following which they will undergo in-service testing on the line for about two months. Delivery of the production cars will begin in January. The entire $17,000,000 fleet will be on the tracks by mid-1965, and the antiquated "black car" fleet will be retired.

A press release inserted recently in this department stated that New York's new subway trains to the World's Fair were air-conditioned, which is not quite true. A letter from Carl E. Sturmer, 72 Charnwood Rd., New Providence, N.J., points out that the 430 new cars on this run have an air-circulation system but not the actual air-conditioning such as is present in the new Port Authority and Chicago transit cars. However, Long Island Rail Road trains to the Fair were air-conditioned in hot weather.

STATEN ISLAND Rapid Transit, serving 20,000 commuters daily on its passenger line extending between north and south ends of the island, is in dire need of more equipment, reports Charles R. Huff, 143 Revere St., Staten Island, N.Y., who says it now uses 40 of its 48 passenger cars in rush-hour services. The line hopes to obtain surplus cars from the BMT Division of New York City Transit System.

Only a few years ago the city bought a few SIRT passenger cars and used them on BMT lines for a short time before scrapping them. SIRT then had more than enough equipment for its own use, but a fire in the shops last year destroyed several cars. Recently, car colors have been changed; gray ends replaced drab olive green.

Mr. Huff also tells of a counterfeiting scheme involving about 100 SIRT commuter tickets a month. This was

Southern Pacific Railroad photograph

Remember the days when the Southern Pacific's ancient ferry terminal in San Francisco was a focal point for streetcars of the Municipal Railways?

Automatic train operation in London area

English train under automatic control approaches a command spot. You can see the local apparatus at trackside and the aerial on front of the driving cab.

Both photos copyright 1964 by London Transport Board

Equipment is laid out for test in one of the four-car units. (Left) Auto driver and safety-control boxes. (Right) Relays which respond to commands and actuate motor and brake equipment. At both the left and right are connection boards which allow circuit modifications to be made without disturbing the train wiring. The tests are made on a four-mile stretch of track.

solved by city police and Baltimore & Ohio special agents (B&O owns SIRT). A printer had been making photo-offset reproductions of the tickets so cleverly that for some time they defied detection. At length a conductor noticed an unusual number of riders getting off at stations short of their ticket destinations. Investigation led to the printer's arrest. He had been selling copies of $10.25 monthly tickets for $5 each.

THE URBAN TRANSIT bill, which Congress passed and President Johnson signed July 9th, after Farm Belt representatives had blocked a vote for over three years, offers $375 million in Federal aid for hard-pressed passenger service in urban areas. Bert Pennypacker's letter on page 45 tells how some of this money will be spent.

SINCE abandonment of the Canal Street trolley line in New Orleans last May 30th and the quick removal of all rail and catenary so that buses could run the following Monday morning, at least 12 NOPS trolleys have been donated to museums, we learn from Otto A. Goessl, 6959 Canal Blvd., in that city. (Though the cars were *donated,* the museums had to pay the company a fee of $700 each for loading them on flatcars for shipping.)

Included are Nos. 832 to Pennsylvania Ry. Museum at Arden, Pa.; 836 to Warehouse Point, Conn.; 850 to Branford; 913 to Perris, Calif.; 918 to High Point, N.C., Museum Asso.; 919 to S.W. Historical Society at Dallas, Tex.; 924 to NRHS at Atlanta, Ga.; 952 and 959 to Tennessee Valley R.R. of Chattanooga, Tenn.; 957 to Trinity Valley Railfans of Ft. Worth Tex., and 966 to Chapel Farm, Birmingham, Ala.

Incidentally, the 918 went back to its birthplace, having been built by the Perley Thomas Car Co. at High Point. The Greater High Point Civic Center and Museum Assn. had wanted to obtain one of the local company's products.

All Canal Street cars were scrapped except those for which the museums paid shipping charges promptly, reports Wilbur T. Golson, of Baton Rouge.

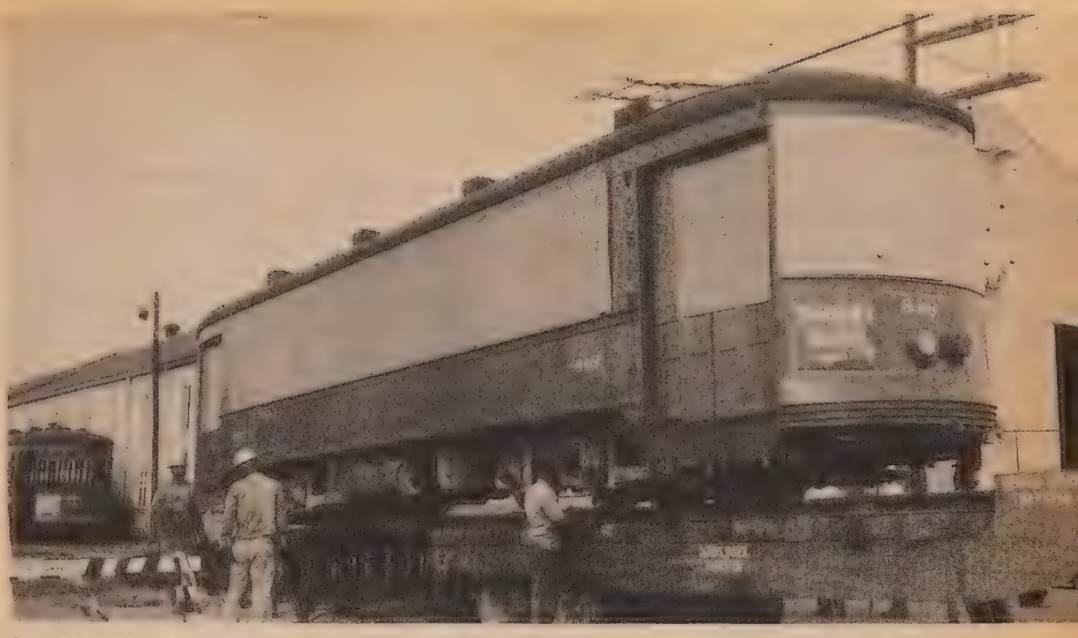
The second volume of E. Harper Charlton's history of Louisiana trolley lines, which was to include the New Orleans system, has been delayed indefinitely because of illness in his family.

Our best wishes for a quick recovery.

A NEW and very long list of slides *Electric Cars, Rockies to East Coast,* is available for 35¢ from the nation's biggest dealer in rr.-picture slides, Thirty-five Slides, Box 368, Green Mountain Falls, Colorado 80819.

FOUR RAILS. The following comment on London (England) Transport's red subway trains comes from Bill Warden, 1216 Shamrock Lane, Waynesboro, Va.: "When I rode those trains some time ago there were four rails. The third rail was located outside the running rails, as it is in the United States, this being the *hot* side of the DC supply to the traction motors. But the American practice calls for running rails for the return path of the current, while the British use a fourth rail between the tracks for this purpose. Both their third and fourth rails are insulated from the ground."

"The purpose of four rails, as I understand it, is to prevent electrolytic corrosion between the rails and the many cast-iron sewer and water pipes that burrow through the London soil in the vicinity of the Underground. I never knew if the corrosion prevention was worth the added cost of the fourth rail. No other subway, to my knowledge, ever required it."



Car No. 918, retired by New Orleans Public Service, was photographed last June at the Canal Street barns, ready for shipment on a flatcar to Atlanta, Georgia. Wilbur T. Golson, 9124 San Lo Drive, Baton Rouge 15, La.

FULL-SCALE trials of automatically driven trains are being made in England on a 4-mile section of London Transport's Central Line between Woodford and Hainault, including three intermediate stations, with the cooperation of the trade unions involved.

The system, based on experiments started in 1962, is designed to ensure more uniform running of trains and more efficient use of current. Special trackside equipment was installed alongside the old signaling, while green-colored plastic "relay rooms" were built on three station platforms. Instructions to the train are transmitted by electrical impulses fed to the running rails and picked up by a coil on the train. They are passed on to the "brain," a box of electronic equipment and electrical relays. These impulses operate electrical circuits which, in turn, actuate the brakes or the motors so that the train can accelerate, coast, and brake accordingly.

The impulses have been pre-set to give the most efficient running, section by section, over the line. Approaching and entering stations there are constant automatic checks to ensure that the speed is dropping correctly to halt the train in proper alignment with the platform, regardless of its passenger load. The train also is stopped at a safe distance if the train in front is held up at any point, and restarts automatically as soon as the section ahead is clear.

Besides the automatic driving, there is a safety signalling system, also induced from the running rails, which causes an emergency stop if the automatic driving equipment has not responded correctly to its instructions.

Each of the four trains used for the trials consists of two motor and two trailer cars. Three are indistinguishable, as far as appearance and passenger accommodation are concerned, from those in normal service. On the fourth train, the front section of the driving car at either end is partitioned into separate compartments holding automatic driving and safety signalling equipment, set on racks and shelves. These cubicles facilitate observations and tests by London Transport engineers. Nineteen miles of wire were used to connect up the complex apparatus on the four trains.

Each train carries a one-man crew, a train operator, who travels in the motorman's cab and can switch over to manual control instantly if any part of the automatic system should fail. He uses a control in the cab to open doors at station stops and to close them again. He must then close the cab window to complete the circuit, and press buttons to actuate the automatic control mechanism, putting the train into motion. (See the photographs on page 42.)

CASTLE SHANNON incline line at Pittsburgh, Pa., closed down last June 30th. The Port Authority of Allegheny County said it badly needed repairs but it may be reopened in the not-distant future, reports Jim Cerny of Pittsburgh and Donald Slick, Oil City, Pa.

The incline, 1350 feet long, carried autos and trucks as well as passengers up the side of Mt. Washington. Its demise leaves two inclines still operating at Pittsburgh; the Monongahela incline, now under Port Authority operation, and the Duquesne Heights incline, privately owned. Voluntary efforts of citizens have kept the latter running in the last 2 years; we hope it will continue.

ALTHOUGH the trolley lines of Montevideo, capital of Uruguay, stopped running in April, 1957, seven different types, from horsecars to suburban trolleys were saved as historic relics and placed on exhibition at the Fernando Garcia Municipal Museum, where Arnold Irvine Reid, of Casilla 4804 Correro Central, Buenos Aires, Argentine, saw them recently. These cars, now out in the open, will soon be housed in a closed pavilion. Mr. Reid took photos of them and will sell 35mm color slides of them for $5 a set of 6 in 35mm black and white for $1.50 a set.

Mr. Reid is often host to fans from the U.S. and overseas. He asks anyone contemplating a visit to contact him at his office between 1 and 5 p.m. weekdays and he will be glad to show them around the city. He is with the Odeon Record Co., Avenida Cordoba 669, Buenos Aires.

SET of 9 colored postcards of Columbia & S.W. Ry. trolley photos 50¢. Write Gerald Brookins, 7100 Columbia Road, Olmsted Falls, Ohio 44138.

L.H. Reichard, Chicago Transit Authority official, checks headlight-tail-light assembly on new CTA car, first time that 2 individual sealed beam headlights were housed in same assembly in rapid transit operation.

Looks like a sylvan dell. Former Pittsburgh Rys. car No. 1686, now working for Port Authority of Allegheny County, runs on narrow street on Fineview line.
Stephen D. Maguire, 1411 River Rd., Belmar, N.J.

New Electric Publications

CLANG! CLANG! THE STORY OF TROLLEYS, by Sarah R. Reidman, 112 pages, 5x7", illustrated with drawings by Don Lambo, is an accurate and entertaining short-story of streetcar days written for children, published by Rand, McNally & Co., 405 Park Ave., New York City, $3.50.

TRACTION PLANBOOK AND PHOTO ALBUM, 60 pages, 8x11½", for modelbuilders, is published by Railroad Model Craftsman, Ramsey, N.J., $2. Here are all the classic types: open, closed, city, interurban, PCC, master unit, etc., including passenger and non-revenue equipment used on horse, cable, and trolley lines, past and present, in photos and scale drawings.

TRANSFER VALUES OF PRIVATE METROPOLITAN TRANSIT SYSTEMS: a Study of Pittsburgh Railways, by Frank J. Wright, 36 pages, 5x7", Duquesne University Press, Pittsburgh, Pa., $1. This booklet analyzes value concepts and techniques used in appraising Pittsburgh Rys. in the transfer to public ownership, plus principles used in other cities.

Lines of the many trolley companies that ran into Taunton, Mass., at one time or another are covered in TRANSPORTATION BULLETIN No. 68 of NRHS, Connecticut Valley Chapter, available from Roger Borrup, Warehouse Point, Conn., at $1. Written by Carlton E. Tucker, this 22-page bulletin boasts some fine old photos, maps, rosters.

THE TRAMWAYS OF PORTUGAL; a Visitor's Guide, by J. H. Price, and VOLK'S RAILWAY, by Alan A. Jackson, are the latest traction booklets of the Light Railway Transport League. The former has 35 pages filled with stories and photos from Lisbon, Oporto, Coimbra, Sintra, and Braga. Only the last mentioned line is now gone. The Volk's 20-page pamphlet covers the years from 1883 to the present of this early British electric third-rail seaside line. Both books are offered as a set for $1 in cash or international money order ($1.30 by personal check) sent to J. Barrie, 21 Endymion Rd., London N.W. 4, England.

LRTL also offers a set of ten 35mm color slides of the Manx Electric Ry. interurban line, good-quality duplicates, for $3 in cash or international money order ($3.30 by personal check) sent to W. J. Wyse, 27 Lexton Gardens, London S.W. 12, England.

RAPID TRANSIT CAR & LAYOUT DESIGN is a 16-page bulletin featuring New York City cars and layouts for model trains to be run on surface, in cuts, and in subways, with diagrams. Published by Silver Leaf Rapid Transit Models, 43 Marlborough Rd., Brooklyn 26, N.Y.

In hopes of producing a new monthly magazine for traction fans and modelers, Vane A. Jones Co., 2525 E. 36th St., Indianapolis, Ind. is asking for enough advance subscriptions to permit him to do this. Interested fans should write for a free brochure containing excellent sample photo pages for TRACTION AND MODELS. Enclose a 4¢ stamp with each request.

We see the first 2 of Chicago Transit Authority's 180 new-look air-conditioned rapid transit cars, built by Pullman-Standard for the Lake and Douglas routes.

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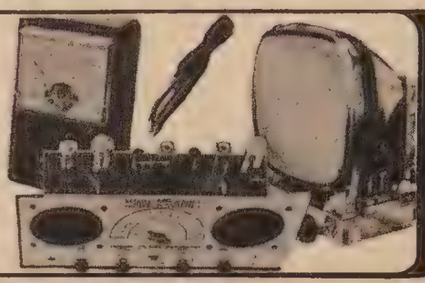

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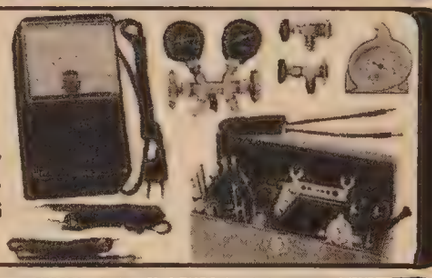

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THE READING'S PASSENGER PROBLEM

PASSENGER TRAIN BLUES, our October editorial, drew these comments from Bert Pennypacker, 4307 Palmetto St., Philadelphia, Pa., author of the new book, *Reading Steam Pictorial* (reviewed last month):

"The Reading's president made his forceful remarks on passenger service deficits in an effort to rock the boat locally. As you may know, the PSIC (Passenger Service Improvement Corp.) and SEPACT (Southeastern Pennsylvania Transportation Compact) will be superseded by SEPTA (Southeastern Penna. Transportation Authority), which is to acquire and operate both Reading and Pennsy commuter lines in this area.

"SEPTA is run jointly by 5 separate counties: Phila., Delaware, Chester, Montgomery, and Bucks. Its initial goal is buying the Phila. Transportation Co. and Red Arrow Lines. Eager to hurry things along, the Reading will use any tactics at its disposal. Actually, its only passenger service of any account are commuter lines, since the routes to Pottsville, Bethlehem, and Jersey City have deteriorated to a very few trains.

"Philadelphia is slated to get about $36 million in Federal funds from the recently passed Urban Transit bill. Other improvements here will be extension of the Broad Street subway northward and southward, and a tunnel connection between Pennsy's Suburban Station and a new Reading Terminal to be built at 10th and Arch streets. Under unified commuter operation, this will permit RDG and PRR trains to run *through* the city instead of terminating here. For example, a Reading MU local might come in from Lansdale, stop at various RDG and PRR stations, and continue out of the city on the Pennsy, say to Paoli, Media, or Wilmington.

"Such changes take time. They cannot be realized in months, may require many years. If RDG wants eventually to get rid of its busy but nonpaying suburban lines it must accept the present slow rate of progress. After all the proposed three-tracked midtown tunnel to connect the two terminal stations is estimated to cost $40 million. Much nearer completion is a Reading stretch of new electrification, paid for by the city: installation work begins this fall on catenary for the 5-mile trackage between Newtown Jct. and Fox Chase." •

ANOTHER letter about *Passenger Train Blues* comes from Roderick Craib, the Reading's director of public relations. Rod quotes from our editorial: "We wonder how much of the Reading's passenger losses are due to . . . the ICC's 'outmoded and inaccurate accounting practices.' "(Those last five words were written by Stanley Berge, professor of transportation at Northwestern University.)

Rod goes on: "A new study made by McKinsey & Co., management consultants, concluded that even figured on an 'avoidable cost' basis, Reading's annual passenger deficit is $5,100,000, which is not substantially different from the $5,700,000 annual passenger deficit shown by ICC accounting methods. Even after taking into consideration the $1,850,000 that Reading receives in public support, there is a cost drain to the Reading of over $3,250,000 a year resulting from passenger services.

"Reading handles about 11 million passenger trips a year, about 10,100,000 of which are in the Philadelphia suburban area. Our loss per passenger trip is 41 cents before contract payments, in the same suburban area, and 24 cents *after* contract payments. For the 880,000 passenger trips outside that area, our average loss per trip is $1.08.

"You wind up your editorial by saying, 'Long ago, the Reading also had a wonderful flair for wooing passengers. Today, a less imaginative RDG is bogged down by passenger deficits and thinking gloomily how much money it could save by returning to its original status as a freight-only road.'

"It's not a question of today's Reading Company lacking imagination. It's a question of where we would get the cash to cover losses additional passengers would bring in.

"Incidentally, our original status was not as a freight-only road. One of our predecessor companies, the Philadelphia, Germantown & Norristown, began carrying passengers behind the locomotive *Old Ironsides* in November, 1832."

(Editor's note: Rod Craib is right. That predecessor road carried passengers in 1832. But the old Philadelphia & Reading itself, before taking over the older PG&N, originally hauled coal and not people.)

E. PAUL GANGEWERE, the Reading president quoted in our October editorial, has just been appointed chairman of the board and replaced in the presidency by Charles E. Bertrand.

The new president began railroading as an Alton switchman in 1937 and became a B&O career man before going to the Reading a year ago as executive vice president. His election to the presidency had been resisted for several months by the New York Central, which has an 11.2 per cent voting interest in the line; but the B&O, with a more impressive 49.93 percent of the Reading's voting stock, finally outmaneuvered the Central. •

Although the Reading's passenger business as a whole is very much in the red and is getting worse every day, the steam-powered Iron Horse Rambles are profitable. The 2100 and 2102 put on a show when this shot was made near Locust Summit, Pa.
Jack Emerick (C&O asst. trainmaster), 444 Highland, Fort Thomas, Ky.

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The NRI training in Servicing Electrical Appliances tells you everything you need to know, right from the basic fundamentals about electricity. And your training will cost less than 20¢ a day.

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"I can't do hard manual labor. That's why I'm more than thankful for your appliance course. It actually put me back on my feet. I started a full time repair shop half-way through the course and make as high as $30 some days." —*Oscar W. Wikman, 632 Florence Ave., Astoria, Oregon*

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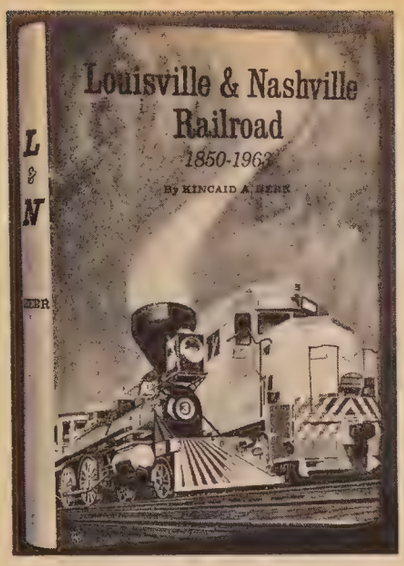

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LOUISVILLE & NASHVILLE RAILROAD (1850-1963), fifth edition, by Kincaid Herr, 402 pages, 6¾x9½", copiously illustrated and indexed, issued by Louisville & Nashville RR., Public Relations Dept., P.O. Box 1198, Louisville, Ky. 40201, $4.

Kincaid Herr

The author began writing this history in 1939 for serial publication in L&N Magazine, of which he was then a staff correspondent but today is the editor. It ran in 43 instalments. To please many readers who wanted the material in more permanent form, the railroad company put out the first hardcover edition of Herr's book in 1943. It sold well. Other editions followed.

We now have the fifth edition, published on the road's 114th anniversary. With much fresh material and many more pages, it is virtually a new book. Handsomely bound in gold-stamped maroon, it has about 200,000 words of text printed in easy-to read type, 300 illustration (photos, drawings, maps, timetables.), and a full-color jacket.

The L&N is one of the very few roads which have operated for more than a century without once going into a receivership or changing its corporate name. Herr's story is worth reading. He did an expert job of research into musty records, fading newspaper and magazine files, and earlier books, besides getting some gems of information and anecdotes from many L&N employes.

He covers such items as the 56 shortlines that make up "The Old Reliable," L&N's 19 presidents, construction days, wars, floods, roadway and track, famous trains, and interesting details on steam power not included in Charley Castner's current *Railroad Magazine* article. It's a modern book of rail lore with an old-fashioned price.

Readers of that article who want to know more about L&N should get, in addition to Herr's book, a volume by Richard Prince entitled *L&N Steam Locomotives,* from which Charley dug some of his facts. Dick's book has 128 pages, 8½x11", hard covers, 240 photos, many diagrams, alltime steam roster. It is now a rare item, but the author (Box 724, Green River, Wyo.) has a few copies available at $7.50 each.

Rock Island Lines photo

Ralph Creger, Rock Island dispatcher, is the author of a controversial book.

SHIPS AND NARROW GAUGE RAILS: *The Story of the Pacific Coast Company*, by Gerald M. Best, 155 pages, 8½x11", illustrated, plus 2-color map 9x19", indexed, Howell-North Books, 1050 Parker St., Berkeley 10, Calif., $6.

Relatively few books, like this one, combine rails with marine lore. "Jerry" Best tells a unique story ranging from southern California to Alaska—two horse-drawn lines plus considerable steam power on land and sea—with dependable text matter and rosters as well as good pix, adequately captioned, drawn from his vast collection of 37,500 negatives and 75,000 prints. Jerry is a fabulous character. He worked 35 years for Warner Bros. movies and Walt Disney, has written six railbooks, and was No. 16 in *Railroad Magazine's* series of "Interesting Railfans."

Another new Howell-North book with marine interest is *The Staten Island Ferry,* by George W. Hilton (author of *Great Lakes Car Ferries* and *The Ma and Pa*), 66 pages, 6x9", soft binding, full-color cover, well illustrated, $1. Pix include Staten Island Rapid Transit steam and electric operation.

A LOOK DOWN THE LONESOME ROAD, by Ralph Creger, assisted by Erwin L. McDonald (editor of a newsmagazine), 223 pages, 5½x8¼", Doubleday & Co., 575 Madison Ave., New York 22, N.Y., $4.50.

The author of this timely and important book on race relations, especially with regard to railroad men, is chief train dispatcher on the Rock Island's Arkansas Division at Little Rock and a member of the AFL-CIO Train Dispatchers Association. His father was a Rock Island station agent. In 1936 Ralph hired out as a section laborer at Monroe, Iowa, his birthplace; later he learned telegraphy while employed as a station helper, and became a train dispatcher in 1943. On a visit to our office he discussed plans for another book, which he is now writing.

"My *Lonesome Road,*" he told us, "has quite a bit of railroad material but its primary theme is prejudice and bigotry. My next book will stick closely to the rails. CRI&P still uses Morse telegraphy, mostly at Little Rock. Nearly all of our lines south of here are dispatched by Morse."

A HISTORY OF RUSSIAN RAILWAYS, by J. N. Westwood, 326 pages, 5½x 8¼", illustrated by photos and line drawings, with 15 appendices, bibliography, and index, George Allen & Unwin Ltd., 40 Museum St., London W.C. 1, England, $7.50.

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1.							
2.							
3.							
4.							
5.							

1. Are you and all persons named herein now in good health and free from any physical defects or deformities to the best of your knowledge?

2. Have you or any other person named herein during the last five years had any medical or surgical advice or treatment or any other departure from good health? Yes_____No_____If the answer is yes, please give details_____

I have read the foregoing questions and I represent and affirm each answer to be true. I agree to accept the policy that may be issued upon this application. I also agree that the company shall not be liable for payment of any benefits upon sickness, disease, or injury, arising prior to the date of acceptance of this application. I reserve the right to return the policy within 10 days and receive my money back if I should decide not to continue it. Dated this_____Day of_____19____

SIGNATURE_____
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RAILWAY HOLIDAY IN FRANCE, by George Behrend, 189 pages, 5½x8½", illustrated with photos and maps, bibliography, indexed, David & Charles Ltd., 39 Strand, Dawlish, Devon, England, also Macdonald & Co. Ltd., London; $4.25 (U.S.), $4.50 (Canada).

The author of *Grand European Expresses* and *Pullman in Europe* gives detailed descriptions of trips over five French railway regions: routes, rolling stock, trackside installations, views from train windows, historical background, and a complete list of locomotive depots.

LIGHT RAILWAYS: *Their Rise and Decline*, by W. J. K. Davies, 312 pages, 6x9", illustrated with drawings and photos, appendices, bibliography, indexed, Ian Allan, distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y., $11.

A comprehensive work on shortlines in Europe, Asia, Africa, and Australia.

THE MILWAUKEE IN IOWA, by Frank P. Donovan, Jr., May '64 issue of *The Palimpsest*, 252 pages, 5½x8", full-color soft cover, illustrated with photos and maps, published by State Historical Society, Iowa City, Iowa, 50 cents.

"I've made my mark on the surface of the earth," said James J. Hill, "and they can't wipe it out." By the same token, Frank Donovan has made his mark on railroad literature, with a long list of competently written magazine articles and books, of which *The Milwaukee in Iowa* is the latest but certainly won't be the last.

SOURCES OF INFORMATION IN TRANSPORTATION, 262 pages, 8½x11", paperbound, Northwestern University Press, 816 University Pl., Evanston, Ill., $5.

A comprehensive bibliography covering railroads (including, of course, *Railroad Magazine*), highways, motor carriers, metropolitan transportation, pipelines, inland waterways, airlines, etc.

COLORADO ANNUAL 1964, edited by Cornelius W. Hauck and Robt. W. Richardson, 16 pages, 8x11", thick coated paper, paperbound, illustrated, Colorado Railroad Museum, Box 641, Golden, Colo., 50 cents.

Impressive photos of narrow-gage railroading, summer and winter, sandwiched between readable text matter.

BULLETIN No. 110, edited by Charles E. Fisher, 96 pages, 6x9", illustrated, The Railway & Locomotive Historical Society, Inc., Baker Library. Harvard Business School, Boston, Mass., members $2, non-members $3.

These authoritative and widely-quoted *Bulletins* are found in private, public, school, and technical libraries all over the English-speaking world. No. 110 opens with a long biography of Charles P. Clark (1826-1901), a colorful former president of the New Haven, written by Charles E. Smith, a retired vice president of that road. Next comes an unusual piece by Mr. Fisher on twin headlights, followed by articles on the East Broad Top, coal roads, and so on.

DIESEL AND ELECTRIC TRAINS, by B. K. Cooper, 5x7", illustrated with photos and drawings, indexed, Weidenfeld & Nicholson, distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y. $3.25.

Technical details on modern trains in Great Britain and Europe.

JAMES WATT: *Pioneer of Mechanical Power*, by Ivor B. Hart, 128 pages, 5x7", illustrated, indexed, Weidenfeld & Nicholson, distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y., $3.50.

A biography of this kind is good background material for an understanding of steam locomotives.

TRACTION PLANBOOK AND PHOTO ALBUM, 68 pages, 8x11", Model Craftsman Pub. Corp., Ramsey, N.J., $2.

Detailed drawings and photos of various types of streetcars and interurbans for modelbuilders.

***History of the* GREAT WESTERN RAILWAY: Vol. 1 (1833-'63), by E. T. MacDermot, revised by C. R. Clinker, 490 pages, 6x9" illustrated (photos, old prints, drawings, and maps), with appendices, indexed, Ian Allan, distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y., $16.**

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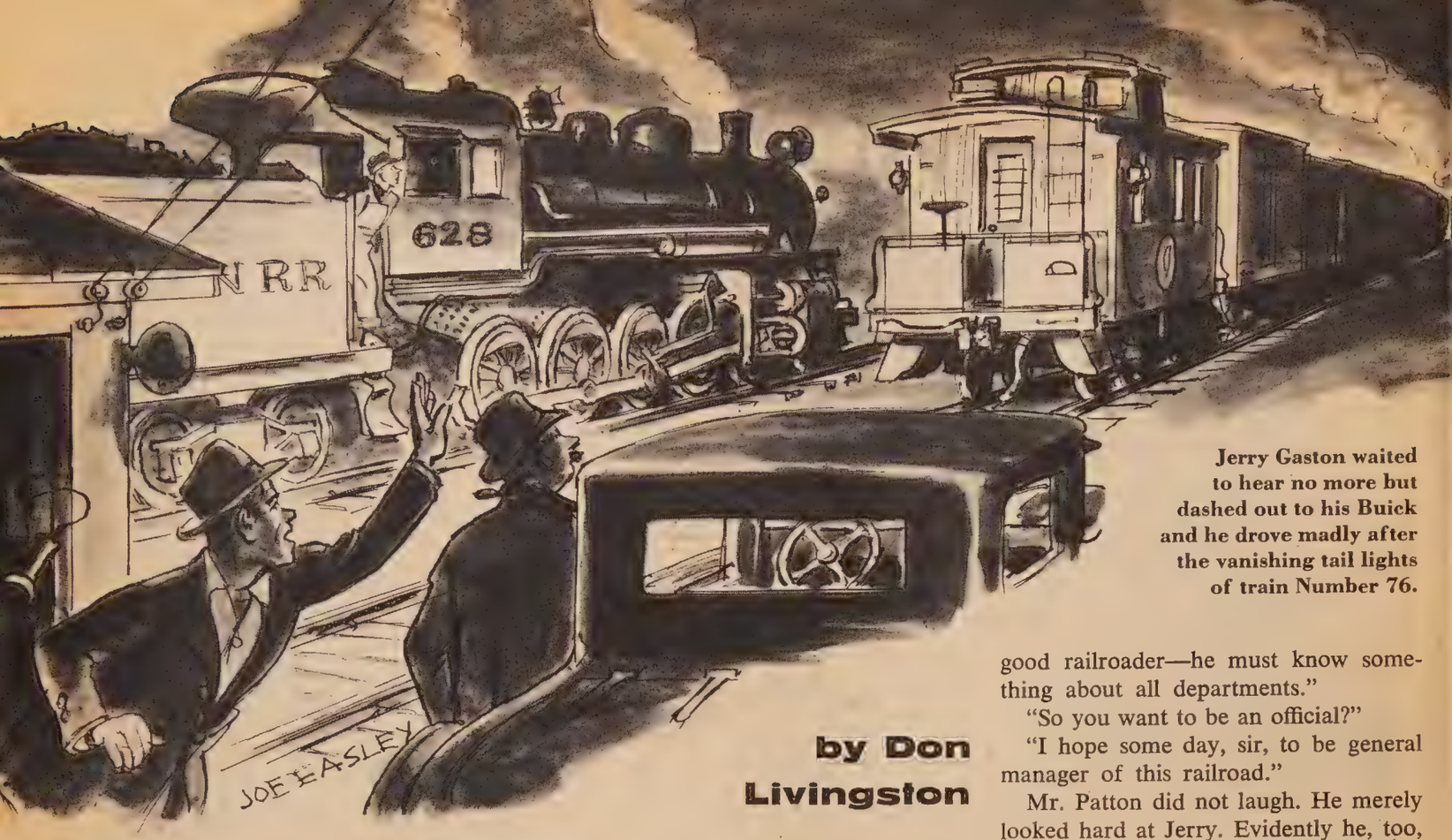

Jerry Gaston waited to hear no more but dashed out to his Buick and he drove madly after the vanishing tail lights of train Number 76.

LIGHTNING SLINGER

by Don Livingston

A MESSENGER boy brought Jerry Gaston a note from Superintendent Patton wanting to see him. Jerry, who was pounding brass as an extra operator in the Medford relay office, penciled his service record on the tonnage report he had just finished sending, tapped the receiving operator the "25" signal, rolled down his sleeves, and marched across the adjoining general office into the door marked "Private."

Tall and lean, he moved with brisk, positive stride as became a young man of self-confidence. Jerry had been expecting the summons. It was no secret on the Oil Belt & Western that Jerry was preparing for the hazardous and discouraging climb up the ladder to officialdom. Not boastfully but matter-of-factly he had announced that some day he'd be general manager.

He believed that a general manager should know all phases of railroading and the best way to learn this subject was to work at it. Jerry had been doing just that. By clever maneuvering he had managed to handle various jobs over a period of four years. But one big department he had not yet invaded was train service.

"A general manager who can't run a train is unthinkable," Jerry decided. And since the telegraph job he now held was being pulled off, he felt that he should go into train service. He asked the Old Man to put him on as extra brakeman. Gleefully he advanced into Mr. Patton's office, taking care to let his sand-colored hair fall into a cowlick.

"Sit down, young man!" the superintendent grunted, nodding toward a straight-backed oak chair.

He looked at Jerry through bifocal glasses. Mr. Patton was short of stature and sharp of tone. With or without glasses he could see further into a man than any other brass collar on the OB&W. On the desk before him lay a brief letter which Jerry's quick glance recognized as one he had typed two days before.

"Why," asked Mr. Patton, tapping it with an index finger, "should you be transferred to train service?"

"Because, sir, I don't want to be a lightning slinger all my life."

"Oh, you don't, eh? Well, let me tell you something. You're not a lightning slinger at all! It takes more than telegraph knowledge to make a lightning slinger; it take conscientious devotion to a job, a sense of responsibility—"

"But I need wide experience, Mr. Patton. If a man's ever going to be an official—I mean, if he's going to be a good railroader—he must know something about all departments."

"So you want to be an official?"

"I hope some day, sir, to be general manager of this railroad."

Mr. Patton did not laugh. He merely looked hard at Jerry. Evidently he, too, had heard the sandhouse talk about the young fellow's ambition.

"Son," he said, "I've just finished looking over your service record. In four years of railroading you have drawn pay as a callboy, section hand, mechanic's helper, freight trucker, ticket clerk, and telegrapher."

"Yes, sir."

"What you need," the Old Man went on, "is to learn how to stick with a job. And I've got one for you. I'll give you a job where you'll really learn something—if you're good enough."

Jerry's heart jumped. The boss must be talking about the dispatcher's trick from which Herb Mason was soon to retire. A trick, the first real step up the ladder! From trick dispatcher to chief, to trainmaster, to superintendent; Jerry had the course mentally charted.

Of course, he hadn't expected to be offered the position just yet. Nobody knew when the elderly Mr. Mason was going to retire. Mason himself already had set the date half a dozen times, only to change it. But if the opportunity had come, Jerry was ready. He could sandwich in train experience later.

"At four o'clock tomorrow," Mr. Patton said, "report for duty as second trick operator at Mine Junction."

Jerry's blue eyes popped wide. Mine

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Junction was an isolated "OS" job in a boxcar office on a wind-whipped plateau forty miles north of Medford, commonly referred to as the Alcatraz of telegraph men.

"You surely don't mean Mine Junction?" Jerry gasped.

"I mean I've hired you in a new department for the last time," Mr. Patton said grimly. "If you stay on the OB&W Railroad, you stay in telegraph. Some day you might be a lightning slinger."

THERE was nothing boastful about Jerry Gaston. He was a lanky fellow with a friendly but rather homely face, a firm jaw, a pug nose, and trousers that usually bagged at the knees.

To Jerry it seemed as entirely consistent for him to prepare for the general managership of the road as for other fellows to prepare for careers as doctors, bankers, and bond salesmen.

Now he had met his first serious obstacle. For some mystifying reason, the Old Man wanted to bury him at Mine Junction. Jerry was humiliated. Obviously the official ranks of the Oil Belt & Western suffered from a lack of broad-minded men of understanding, but Jerry's chance of remedying this situation wavered around the zero mark.

It was a dark hour that night as he paced the floor of his room at the Alhambra boarding-house—a room suitably decorated with photos of engines and trains and other railroadiana.

His blue mood was interrupted by a whistling and slamming of the door as huge "Curly" Brewster burst in.

Curly was a boomer lightning slinger. Under one flag or another, using various names, he had pounded brass not only on several divisions of the OB&W but on just about every major pike west of the Blue Ridge Mountains and even as far north as the Algoma Central & Hudson Bay. At one time, a few years before, he had been in Medford long enough to teach Jerry Gaston the mysteries of dot and dash.

As he entered, the two began thumping each other affectionately and swapping epithets like long-lost pals.

"I hear," said Curly with a twinkle, "that you are on your way to become general manager?"

"That report," came the gloomy answer, "is overly optimistic."

For all of his breezy manner, Curly Brewster was a bit seedy, but was in the pink of condition and contented. He grinned as he broke the news that he'd spent his last two-bit piece that morning.

"Got laid off the Illinois Central three weeks ago," he said. "Every 'CD' from hell to breakfast has a full board. Guess I'll hit you for a ten-spot or so until I can get my feet under another telegraph table."

Jerry was silent. A speculative light crept into his eyes.

"Oldtimer, you've got the answer!" he exclaimed. "Boy, will I show Mr. Patton now! And he thought I wouldn't go to Mine Junction."

"Break," said Curly, "and write me a clearance. What's all this about?"

Jerry became serious. "Just what would you be willing to do to get a telegraph job?"

"Jerry," said the boomer, "that's a question. Being without a job is hell—just plain hell. Why? Don't ask me. When I've got one I'll lick a conductor or poke a hard-boiled T.M. in the face, knowing full well they'll fire me for it; and I'll laugh at the super's chief clerk when he hands me my time. But now I've got a misery in the pit of my stomach. I need the din of telegraph instruments. It's part of life itself. What *wouldn't* I do to get a job?"

For a moment Jerry sat regarding his friend quietly. Then he laughted.

"I've got a job for you."

THE TWO men drove to Mine Junction in an antiquated roadster loaded fore and aft with bedding, utensile, and food. Mine Junction office was a tiny spot in a mesa colored with a patchwork of barren brown and struggling green. And not even a farmhouse nor herd of cattle to suggest life.

Through all this the main line ran as straight as a taut string, with ties set deep in ballast and rails reflecting the glare of hot prairie sun.

Across the main stem from the office was a long passing track, from which a wye connected with a coal-mine spur. Beyond that lay a series of holding tracks filled with loaded coal cars waiting to be picked up by the main-line freights. No more lonely place could be found on the entire length of the Oil Belt & Western.

A partition separated the boxcar into two rooms, one to serve as living quarters, the other as office. The telegraph table, set with two instruments, extended across the end of the office facing the track. There was a chair for the operator and an empty nail keg for any infrequent guest, a small pigeon-hole case for order blanks, and the required assortment of flags, lanterns, and fuses.

As Jerry looked over the place, he realized why operators usually quit after a one-day stay. The previous man had left two days before. The office was thick with dust whipped up by speeding trains. Jerry attacked it with a brush he found hanging on the back wall. Curly, in the doorway, watched with an air of disapproval.

"I see," he said, "that the new general manager has taken over."

Jerry stared at him. "What do you think of our new quarters?"

The boomer grinned.

"Talk about a vacation with pay, we've got it," he said. "No brass collars nosing around; no wire chief raising hell. Nothing but leisure and peace and scenery. Take a sniff of that prairie breeze. I like it here—*like hell!*"

"Before this time tomorrow," said Jerry, "I'll have to tie you to the telegraph table to keep you from hopping every rattler that comes through. But forget it. You stay thirty days or no pay. That's our contract."

He stepped to the four-strap switchboard and pulled the plugs that cut out the wires. Instantly a familiar clatter filled the little office—the strange, metallic, cryptic language of the telegraph. Two sounders spoke from separate resonators, each with its own distinctive tone.

Those sounds accomplished a miracle in that drab little room. No longer was it a mere cramped and colorless shelter from prairie sun and storm. By the magic import of that sound it had become part of a railroad, a telegraph office.

Joy blazed in Curly's eyes. He jerked the chair to the table and cocked an expert ear at one of the sounders.

"Listen to it! That's old Ted Broyles sending a consist from the YD office. Why, it's been years since I worked with that bird. But I'd know his jerky fist if I heard it in Haiti."

After nameless hungry weeks of nontelegraphing, Curly Brewster, the boomer op, was back in his own.

THERE was only one trick at Mine Junction, the period from four p.m. to midnight. During those hours the mine turnaround switched coal cars at Mine Junction and Shaddock Spur, five miles further up the main line. Then after lining up all the loads on the holding tracks, the locomotive returned light to Medford.

And now became apparent the reason for Jerry's willingness to bury himself at the Junction. When engine 628, with a billowing smoke cloud puffed out to the mines that evening. Jerry was riding her deck and under the hogger's direction was feeding coal into the firebox. Thus the youth took his first lesson in traincraft, leaving Curly Brewster in charge of the telegraph office.

The idea that he was committing a serious offense by surrendering his job into the hands of another man did not enter Jerry's head. To him a job was a job, a means to an end. It was, he hoped, a step toward his ultimate goal. Curly was to get half the pay for handling the work while Jerry was out; and what difference did it make who "OS'd" trains and copied orders?

The skeptical ones at Medford would have been surprised to see how easily the youth fitted into his new life. There was no hint of discontent. If Jerry became lonesome he hid it. Each night after the coal switcher had gone and he took his turn at the telegraph table, he'd sit for an hour at a time talking on the wire with young Clyde Lapman, the new operator at High Point. It was Lapman's first job and such practice was a good way to improve his telegraphing.

"I'll make an artist out of that ham yet," Jerry told the boomer.

Curly was doing enough telegraphing to ward off his normal restlessness, and he had discovered that the bass and crappie in a nearby stream were numerous and greedy. The oldtimer asked for nothing better. Even when the mosquitoes made their nightly onslaught and the crickets raised a chorus, he would only slap and swear without rancor. An inward peace had settled upon Curly which promised to remain as long as the fishing continued good.

One evening he failed to show up until after the switch crew had left the Junction for Shaddock Spur. When he did return, proudly displaying the biggest catch of the season, the tail lights of the caboose were disappearing over a hill northward.

"What do you think we're running here?" Jerry asked. "A home for pensioned boomers? You've beaten me out of half a night's training."

"I regret it, kid. Believe me, I do," said Curly. "Personally I recommend more fishing and less ambition. But why don't you jump into your Rolls-Royce and glide over to Shaddock? You can overtake the crew there and redeem a few hours helping old Skiddy keep the pot boiling."

"Good idea," said Jerry.

He showed Curly the coal reports to be telegraphed to the relay office plus two train orders he had copied for Number 76, the fast vegetable train. "Old Man Mason wants you to tell him when 76 is showing so he can fix a meet with Number 7," he added.

WHEN Jerry reached Shaddock that night he found train 628 on the passing track, having just pulled into the clear. Conductor Sam Parks, his lantern bobbing in the darkness, was hurrying to the telephone booth where a dummy phone line connected Shaddock Spur with Mine Junction. It was Sam's business to tell the operator at Mine Junction the hour and minute he pulled into the clear at Shaddock.

Number 76 with wide-open exhaust was roaring up the main. Its headlight showed Jerry and his Buick at the phone booth.

Sam Parks laughed. "By golly, young feller, if persistence will do the trick, you'll be a first-class trainman before the summer is over. Wish you'd phone that buddy of yours that I'm in the clear. My hearing ain't any too good over that phone."

Jerry waited until the caboose of Number 76 had rattled by, the rear brakeman on the platform waving a greeting with his lantern. Then he stepped to the phone. He found Curly

Brewster yelling into the transmitter and ready to burst with excitement.

"Stop him like hell—his caboose just now passed," Jerry said calmly

"Oh, Lord!" Bill groaned. "I gave him an order to meet Number 7 at Banks, and that kid at High Point failed to give the flimsy to Seven. They'll meet in a cornfield as sure as the devil."

Jerry waited to hear no more but dashed out to his Buick. The next moment he was driving madly in the direction of the vanishing tail light of Number 76. Leaving Shaddock, the highway swung from the track at a fifteen-degree angle, but two miles away a curve in the track brought them together again, the highway crossing the track at that point. One thought blazed in Jerry's mind: He must reach that crossing in time to flag Number 76.

Ahead and to his left the open firebox of 814 threw a glare upon the lazy smoke cloud that hung on high.

Jerry reckoned the engine to be three-quarters of a mile ahead. And in the gleam of his own headlight the country road showed rough and rutted. Could he beat the 814 to that crossing?

Where would the trains meet if he failed? With surprising clarity his mind drew a diagram. Not having the order to head in at Banks, Number 7 would roar through at full speed, pulling her usual ten or twelve cars of Texas-bound passengers. The headlight of Number 76 would be obscured by the curve below the Banks passing track switch. Death and destruction could be waiting on that curve tonight!

A chilling realization benumbed the operator. Suppose he did reach the crossing in time and did prevent the wreck, what would Old Man Patton say about his being here, miles from his place of duty?

Suddenly the sacredness of a job struck with a force that left him breathless. Always he had considered a job as a matter of course, only as a rung in the ladder of experience. Now with a pang he realized it was not a commodity to be used merely for gain but a responsibility for lives and property.

FOR a tense moment Jerry's foot on accelerator quivered with the impulse to release the gas and slam on the brakes. He'd turn back to Mine Junction. Whatever had happened and would happen, it was not his fault. But he shook his head savagely and kicked the floor board in frantic effort to drive the accelerator lower. He had to stop that train.

Something white flashed into view up ahead. It was the crossing sign being played upon by the 814's headlight as she came out of a cut a hundred yards away. Jerry could not reach the crossing in time. He had lost!

The 814 thundered over the crossing. Under the gleam of his own headlights Jerry saw the parade of refrigerator cars. He heard their roar and the click of their wheels over rail joints as they rushed toward destruction. His mind worked like lightning. Every nerve was taut. He recalled that on the right side of the road near the crossing was a shallow ditch. Perhaps his Buick would jump across.

It did. The jolt bumped the operator's head against his car top. Then down the right-of-way he raced alongside the speeding train, knowing at any moment a boulder, a ditch, or a brush clump might wreck him and stop his mad race.

He swung close to the speeding train and slipped out the automobile door to the running board. While his right hand guided the steering wheel, his left felt

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for the grab iron on the nearest railroad car, and found it. Then leaving his auto to the wild freedom of the open spaces, he swung to the side of the freight car.

Going over the top to the engine cab took a few minutes. The engineer brought the train to a stop three miles short of the Banks passing track switch. Then the head brakeman ran ahead to flag Number 7, while the hogger backed 76 to Shaddock. The narrowness with which they had avoided a main-line meet left quivering nerves in the crew of 76 that night.

Next morning, using a truck borrowed from a farmer and taking Curly along, Jerry found his Buick overturned in a slough. They pulled it into town for repairs. Then the youth made his reluctant way to Superintendent Patton's office.

Never before had the fear of being discharged entered his head. Now a sense of doom bore down upon him, and the dull pain of remorse.

As he climbed the steps and entered the hall through which he had passed so often his ears took in an old familiar medley; the chatter of telegraph instruments through the window, the hum of busy typewriters in the superintendent's general office, and the booming voice of "Boots" Harlow, the special agent, from some place further up the hall.

All these sounds he had heard many times before, but always before they had been nothing, but routine noise. Now they had a significance. They came from the productive activities of men and women in a vast organization, the Oil Belt & Western Railroad.

THE OLD MAN glanced at Jerry through his bifocals. Then he leaned back in his chair and placed his finger-tips together in tent-shape formation, a familiar gesture which usually presaged a storm.

"Hr-umph! Quite a run you made last night, Gaston," he said. "Clear up north of Shaddock that you overtook 76, wasn't it?"

"Two miles north," Jerry replied.

"Quite a run? Seven miles from Mine Junction by rail, farther than that by road," Mr. Patton mused.

The unhappy youth sweated. Why didn't the super ask Jerry what he'd been doing at Shaddock when he should have been on duty at the Junction? Why prolong the agony?

"You have shown much ability," Mr. Patton said "especially the ability to flit from one job to another. Poor business! Never get you any place. But I'll stop that. This time you stay put."

A hot retort formed on Jerry's lips, but he checked it. After all, this was his own fault. If the Old Man wanted to rub it in, he could only take it. So he said mildly, "I expected that."

"Oh, you did, did you?" Mr. Patton snorted. "But just the same, a man who can make the run you made last night, without wrecking himself, must have a level head. This railroad needs level heads. You take over Mason's trick tomorrow night."

Jerry's jaw fell. "Mason's trick?"

"Well, what did you expect—the vice presidency?"

"But I didn't—that is, you don't know all about," Jerry stammered.

Mr. Patton shut him off. "Get out!" he stormed with mystifying ferocity. "You've got the job you wanted. Now don't waste my time arguing about it. Get out!"

Jerry stumbled through the door into the general office. "Mr. Patton told me to take Mason's trick," he gasped to Bob Martin, the chief clerk.

"Congratulations!" said Martin.

Jerry dropped into a chair, breathing heavily. Conscience oppressed him.

"See here, Bob, the Old Man just now made two mistakes. He should have canned me, and he threw me out when I tried to set him straight. I want you to go in and tell him."

"Tell him what?"

Jerry explained: "That I wasn't on the job at Mine Junction last night. I haven't been on it half the time. I've been riding the switcher learning what I went there to learn, and I've had a boomer friend of mine named Curly Brewster handling the job for me."

Martin showed a strange lack of surprise. "Kid," he asked, "didn't you think it odd that the Old Man got so hard-boiled a minute ago and chased you out? He did it because he didn't want you to make any confessions. He knows already what's been going on at the Junction, has known it for some time."

"Then why didn't he fire me?"

"He did write the chief dispatcher a note to do that very thing, but tore it up. He said that any man who would put forth the effort you were putting forth to learn train service must have good stuff in him. He called you a damned fool but wished the railroad had more like you."

"Hurrah!" Jerry cried. "No more drifting around for me. I gotta tell Curly Brewster," he added proudly. "I'm a lightning slinger now!" ●

Next month: "Jacob's Ladder," by Ed Pugsley, retired BCE Ry. conductor.

HOBBY CLUB

Conducted by Sy Reich

ONE of our many overseas readers is Joachim Lehnert, Werdenfelsterstr. 24½, Augsburg 89, Germany, a German refugee from Czechoslovakia now employed in the city's Building and Construction Department.

Sy Reich

"My railfan interest," he writes (in excellent English), "is devoted mostly to the technical side of railway operation such as modern locomotives, rolling stock, signal systems, electrification, and the like. Augsburg is located in Bavaria, where the nation's first practical electric railway traction was applied. I can observe a great variety of older types of electric locos as well as the most modern power on the main lines, which pass through our city.

"Living about half a mile from the main line and a suburban station, I watch rail traffic, consisting of about 400 trains a day, and I ride as many of them as I can. A most instructive trip was the visit to a CTC installation at Frankfurt (Main), where I saw 5 attendants directing train movements.

"I subscribe to and read several railway publications, the best of which I consider the bi-monthly *Moderne Eisenbahn,* and I correspond with railfans and railway men in several countries, some of whom send me railway pictures, timetables, brochures, and so on. I am familiar with a few cities and towns where old retired steam locomotives are in display in parks and elsewhere. One such engine, at Regensburg, is the narrow-gage *Glaskasten,* so called because its cab has magnificent glass windows. Germany's railway museums include those in Munich and Nurnberg."

Roster of Ferrocarril del Pacifico

Locomotive listing compiled by Sy Reich

Road Nos.	HP	Builder	Builder's Model	Wheel Arngt.	Tractive Effort	Weight	Date
501	1800	Alco Pr.	RS-11	B-B	35,075	260,400	1957
502-520	1800	Alco Pr.	RSD-12	C-C	43,695	?	1958-62
521	1800	NdeM	.....	B-B	35,075	260,400	1963
701-725	900	Alco Pr.	S6	B-B	21,825	195,100	1955
801-835	1600	Alco-GE	RSD-5	C-C	40,079	298,800	1953-6
901-904	1600	Alco, AP Alco-GE	FPA-2	B-B	35,075	256,200	1954

Roster based on data from FdelP is accurate as of May 26, 1964. Locomotive builders: Alco Pr. (AP), Alco Products; Alco-GE, American Locomotive Co. and General Electric; Alco, American Locomotive Co.; NdeM, National Railways of Mexico. Nos. 701-703, 714, and 716 were sold to Ferrocarril Chihuahua al Pacifico, not renumbered. No. 711 was wrecked 3/35, rebuilt to FdelP 725. ●

The Steam Parade

We want to hear from railroaders who've had experience in yard service with steam switchers. H. L. Kelso has written an article on "goats" for us; we need a few personal experiences to inject into it. Also, pix of men working on or around goats.

"Some steam power is left on Indian railways," writes Lester C. Harlow, 29 E. Rosevear Ave., Orlando, Fla., just back from a world tour. "In Thailand (previously called Siam) I saw a fast passenger train pulled by a *woodburning* locomotive. In the Philippines, steam hauls some of the sugar crops during peak periods. The railways in Taiwan (Formosa) are mostly dieselized, but I saw a few steam switchers in Taipei yards."

Very soon we will run an article by Bert Pennypacker on "106 Years of Lehigh Valley Steam." We need LV steam pix *with human interest.*

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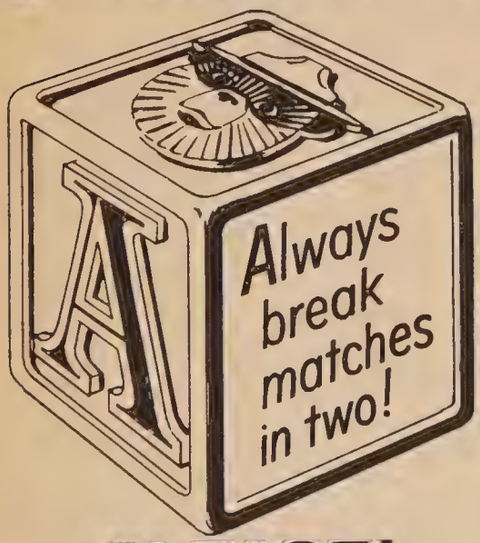

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Strasburg Rail Road, "the Road to Paradise" in Lancaster County, Pa., recently tripled the size of its parking lot for autos because of the booming tourist trade. A 5-acre plot adjacent to the right-of-way not far from the station was purchased for this purpose. It has a capacity of 450 cars. Previously only 150 could be accommodated. A new grill-cafeteria eating place was opened a while ago, and work was started on new trackage and switching facilities, reports L. P. Cummings, Jr., 129 Nevin St., Lancaster, Pa. 17603. He also says the York Southern ceased operation last July 31.

Hoboes made a comeback, after a fashion, last June 20th when the Cadillac-Lake City Railroad, which owns three steam engines, began freight and passenger service between Cadillac and Falmouth, Mich. On that occasion Mulligan stew, the favorite of oldtime knights of the road, was served to passengers. A boxcar was fitted up as a hobo car. Festivities included the election of a hobo king and a hobo queen (neither of whom were, or ever had been, real hoboes).

Readers interested in oldtime hoboes in relation to railroads during the era of steam and Morse will find a detailed article on the subject entitled "A Dollar a Division," by ex-hobo George Milburn, in *Railroad Magazine* for October '58. Very few *bindle stiffs,* as hoboes were called, ride the rails today, for two reasons: (1) it is almost impossible to steal rides on the outside of streamlined equipment and (2) social security and unemployment insurance make hoboes virtually extinct.

Old Number 7, a much-photographed Shay owned by St. Regis Paper Co. in the State of Washington, has finally been taken out of service. She is said to be have been the last active Shay in the Northwest, hauling logs down the rugged mountains for the past 35 years. No. 7 was always a favorite with loggers and is credited with doing more for the industry that any other "puffer belly." She could climb heavy grades and switchbacks that no other locomotive could negotiate. St. Regis had another Shay, No. 5. One of the pair has been sold to a Midwest firm and the other, it is hoped, will go on permanent display at Point Defiance Park in Tacoma, Wash. Oscar B. Lund, 14411 Pacific Ave., Tacoma, sent us this information.

Most popular British Railways girl is Valerie Trapp, clerk on Western Region, elected "Miss Rail News" by her fellow employes, including Geo. Cook and Dave Harris, pictures here.
From Rail News, BR newspaper

Empire State Ry. Museum now has a former Birming. & SE 2-8-0, No. 200, stored near Burlington, Vt., and is considering a midwinter snowplow excursion over the new Vermont Ry.

For $1 you can get a Vermont Ry. railroadiana packet of emp. tt., souvenir ticket, and a photo of No. 200, from the Museum, Box 459, Wall St. Station, New York 5, N.Y. The Museum seeks cash donations to help pay for expensive repairs on its Pullman sleeper *Arsenal Tower.*

On its fifth trip *The Tailisman* left Edinburgh, Scotland, on-time for its 393-mile trip to London, with a brand new 100-mph diesel. At Durham, 120 miles away, it broke down, conked out cold. But after a bit of delay, two trusty steam engines were coupled on and brought the train to Kings Cross Station, where it got the usual red-carpet treatment. The top-hatted stationmaster, slightly red-faced, ducked into his office mumbling, "engine failure."

List of 6226 photographic glass negatives of Alco steam locos built before the 1920's, arranged alphabetically by railroads or industrial lines, with road number, year, wheel arrangement, neg.

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number, and views, mimeographed on 75 pages, may be bought for $3 a set postpaid from Margaret A. Ritchie, R. D. 2, Scotia, N.Y.

Alco donated the original negs. to the City of Schenectady, N.Y., in 1958 to be kept among its archives in custody of the city historian, currently J.W. Joyce. The Alco files are available at City Hall for study and reference, but no printing service is maintained.

Automobile "license" plates imprinted with name "Arcade & Attica RR" and picture of steam loco in black and orange, for use in states using one plate, are available at $1.50 each postpaid from Chamber of Commerce, Box 263, Arcade, N.Y. 14009.

The Kentucky Central Scenic Railway, a 3-mile line at Park City, Ky. (I. King, vice president and general manager, P.O. Box 21), announces that it will operate all year—using heated coaches during the winter—in connection with a motel, golf course, indoor and outdoor swimming pools, horseback riding, skeet shooting, and what are described as "2-, 4-, and 7-hour trips through the world's most beautiful caverns."

With the help of Governor Hughes, who drove the "gold" spike, the new New Jersey Museum of Transportation was opened at the Allaire State Park 3 miles south of Farmingdale on Route 524. The Pine Creek Railroad is operating a 3-foot-gage railroad and has 6 locomotives, 3 in use and 3 on display. Also 8 cars in use or on display. One of the engines is a Shay. Another came from a narrow-gage line in Ireland, with three cars. Also at the State Park is the restored Howell Iron Works, which supplied bog iron to local industries from 1700 to 1853. Under the management of James P. Allaire, it supplied irons to the first commercial builder of steam locomotives in America and also cast rail-joint chairs for the first rail line across New Jersey.

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In the Pittsburgh Area

"It is not widely known that an 0-6-0 Pennsy steam engine. No. 60, Class B6sa, is still stored at Cemline Corp. plant in Harmarville, Pa., near Pittsburgh, where she has been since 1952, when she was bought for use as a stationary boiler," writes David H. Hamley, 123 Fifth St., Aspinwall, Pa. "Brush and trees nearly cover her; a tree about 6" in diameter is actually growing up through her valve gear! She may be seen, after careful search, just over the PRR embankment across Rte. 28 from Dan's Restaurant, near the famous Bessemer & Lake Erie high bridge over the Allegheny River.

"Also, Duquesne Slag still has Alco 0-4-0T No. 4 on its property, but she is little more than junk. The only other steam locos that I know of in the Pittsburgh area are B&O No. 69 and Mesta Machine Co. Nos. 6 and 7 at Homestead, Pa. The latter two are active, but guards don't like railfans."

Dave, who is on the board of directors of the Pennsylvania Railway Museum at Arden, Pa., gives additional info. on 69 (Aug. issue, page 51):

"The B&O, through the courtesy of C.E. Jackman, chief operating officer, has given us a complete inspection and all necessary work to put her back into first-class operating condition. The 69 is being stored at Glenwood Shops until we complete the enginehouse at our trolley museum. One thing missing is the builder's plate. Whoever has it, Baldwin construction number 61559, please *lend* it to us for use as a pattern to have two new plates cast to place on the loco. The present owner may keep his original plate: we only need it for a week or two."

Steam in Canada

The city of St. Thomas, Ontario, about halfway between Detroit and Buffalo, is served by six major railroads and has just opened a small new one, in its pretty Pinafore Park. The mayor cut the ribbon to inaugurate it. The locomotive there is a saddle-tank, built around 1900, standard gage. One "coach" is an open trolley car from Atlantic City and later Toronto. A second coach was the first horse-drawn streetcar used in Toronto.

Incidentally, St. Thomas is the place where the world's biggest and best loved circus elephant, Jumbo, was killed by a Grand Truck freight train one

September night in 1885. Railway officials had assured the Barnum & Bailey Circus people that the track would be kept clear until all elephants were loaded onto the circus train, but an extra freight came up suddenly. The frantic Jumbo ran as fast as he could along the single track, built on a high fill, but engine 88 hit him from the rear.

Mayor Rathie of Vancouver, B.C., suggested that the city buy a steam locomotive and place it in a public park where as a companion for No. 374 is on display, the latter being the first locomotive to reach Vancouver, in 1887. But when he learned she would cost $15,000 he decided to forget it.

However, an alderman, together with some local railroad enthusiasts, formed a committee to raise money for the purpose. They hope to get No. 2860, a Canadian Pacific 4-6-4, now rusting away at Winnipeg. Before the CP dieselized, this engine hauled transcontinental passenger trains into and out of Vancouver.

The community of Belleville, Ontario had a Railroad Week recently at which the favorite attraction was an 1872 woodburner which used to be in the Grand Trunk passenger service between Portland, Me., and White River Jct., Vt. This engine, No. 40, is sent to functions of various kinds and is always a big attraction.

Another famous loco displayed there was the 6400, known as the Royal engine because in 1939 she wheeled a special train carrying the King and Queen of England on their tour through Canada. Fans who visited the New York World's Fair 25 years ago will recall that she was also on exhibition there, with a beautiful monogram on the side of her cab. At the Belleville celebration, special steam trips were made with the Canadian National's 6167.

Steam in Mexico

Francisco Procel, retired editor of National Railways of Mexico magazine, *Ferronales,* says that NdeM management, by agreement with Mexico's president, has decided to keep its narrow-gage line from Mexico City to Cuautla and Pueblo in service indefinitely as a tourist attraction with steam power. Aside from that, NdeM expects to be fully dieselized this year. He sent this news to Linwood W. Moody, an authority on narrow-gage lines, Box 63, Brooks, Maine.

Last summer, Mexico was still using steam, reports Adolf Gutohrlein, 4945 Deeboyar Ave., Lakewood, Calif., just back from a trip down there.

"I saw more than 50 standard-gage locos," he says, "mostly 4-8-4's, a few 2-8-0's, 2-8-2's, 4-8-2's, and 4-8-0's, pulling about half of all the freight trains that entered and left Mexico City. The narrow-gage line is very busy every day, at least 12 steamers, no diesels.

"Veracruz has no steam but is still operating almost 50 streetcars, 4 different types, including one open-air trolley, They are well patronized.

"I also went to Guatemala, a steam fan's paradise. IRCA of Guatemala operates 10 diesels, mostly for fast banana trains and switching; everything else is steam. I am writing up the IRCA for a large edition of the *Railway History Quarterly,* out in December."

"I could not find steam anywhere on a recent trip to Mexico," reports railbook publisher Donald Duke, Box 91, San Marino, Calif., "except on the 3-foot-gage Minerales de Chihuahua, which hauls silver and other minerals to the American Smelting & Refining plant at Chihuahua. I saw no steam at all on the northern part of the Ferrocariles del Pacifico nor the National system. I covered quite a bit of ground south of the Rio Grande, including the Chihuahua al Pacifico (roster in October *Railroad Magazine*). That, as you know, is a new line, one of the most spectacular pieces of railway engineering I have ever seen."

Two rare-type steam locomotives arrived "piggyback" in Denver, Colo., having traveled via flatcar from Monterey, Mexico, where they had operated on a narrow-gage railroad of Miera Mexicana Penoles, a mining firm.

One of the locomotives, an 18-ton Mallet built in 1902 by Koppel Co., Essen, Germany, and one of only two of its kind, will be exhibited at the Denver Wax Museum. The other, a side-tanker built by H. K. Porter Co., Pittsburgh, 1927, will be at De Backer Museum, near Boulder, Colo.

The locomotives were bought by John Birmingham, a Boulder businessman and rail buff, who said he read about them in *Railroad Magazine.* He wrote the Mexican firm and "luckily" found they were for sale.

Setouts and Pickups

Apropos of our lead article this month on the railroad built under the Ice Cap in northern Greenland, it is interesting to note that a huge iron-ore deposit in the Arctic is being studied, 1,000 miles north of Edmonton, Alta., near Snake River. Some say it is the world's largest deposit and could yield 10 million tons of ore a year. The Canadian National Railways is conducting a preliminary feasibility study of a possible railway to bring the ore out. The White Pass & Yukon Railway did a route analysis from air photos. The cost of such a railway could run to $200 million. The CNR report is expected by Christmas. Ted Robson, Powell River, B.C., Canada, sent us this information.

"Tell visitors to Cincinnati and fans in that area that a good place to spend time just watching trains is the depot at Covington, Ky.," writes Jack Emerick, C&O assistant trainmaster, 444 Highland, Fort Thomas, Ky. "Covington boasts 4-track mains, on which you can see, during any 24-hour period, freight and passenger trains of C&O on the L&N passenger fleet) and B&O and NYC freights. NYC generally uses Baldwin 'Sharknose' units in its transfer drags.

"L&N has an interesting engine paint scheme. Its Alco road switchers are solid black, black and white, or yellow and green (ex-Rutland power), while its passenger locos are either dark blue or yellow and gray with a large red herald. Even their yard engines vary in color scheme. The road is renovating all its passenger cars as an inducement for the traveling public —a heartening note."

Traveling camera fans are enjoying Canadian National's new scenerama cars that run through the Rockies. Passengers get a wonderful view from the upper deck of Canada's only full-length, glass-topped, passenger cars. Guidebooks placed on the trains give advance notice of particularly fine scenery, also info. on how to take pix through double-plate glass train windows.

How many fellows collect railroad buttons? Donald Van Court, 13 Garden Pl., Chatham, N.J., has the best assortment we know of. Another collector is E. Higgs, Birmingham, England, a passed fireman on the British Railways. (A "passed" fireman is a man promoted to engineer but still working as a fireman.)

Britons with a yen for our railroads have American Railfans Asso. Next meeting Oct. 26 at Fred Tallant Hall, 153 Drummond St., London N.W.1. Strangers welcome. The club generously supplies guides on week-ends to show overseas visitors the city's complex rail network. Contact Roy Hobbs, 33 New North Rd., Reigate, Surrey, England.

Milwaukee Road is building a new passenger station in Milwaukee, adjacent to a projected new post office. Ground was broken Aug. 4. It will be the first major railroad passenger station built in the U.S. in several years.

100th anniversary hi-fi LP sound recording of Northern Pacific, first rr. in Northwest; Abraham Lincoln signed bill for it in 1864. "Musical Story of a Great Adventure." Record entitled *A*

Thousand Miles of Mountains available for $2.50 from any NP ticket office or $2.75 postpaid by mail from Northern Pacific Ry., St. Paul 1, Minn. Narrated by Raymond Massey plus railroad songs, train sounds, etc. We like it.

New Railroad Books

Virtually all railroad books have been written by men. An established historian, Mildred Fielder, smashed this tradition by writing "Railroads in the Black Hills," put out by Superior Publishing Co., P.O. Box 1710, Seattle, Wash., to sell at $12.50. We expect to review it next month. Mrs. Fielder lives in the Black Hills. She belongs to the South Dakota Historical Society and the Society of American Historians and has nearly 100 magazine articles to her credit.

The following appeal comes from David F. Myrick, 263 Filbert St., San Francisco 33, Calif., who has been gathering material since 1949 on Western railroad lore for use in books. Now that his massive two-volume set, "Railroads of Nevada and Eastern California," has been published, he is finishing up a book on "Railroads of Arizona," which will include chapters on streetcars and railroads in Sonora, Mexico. He requests Arizona and Sonora stories from old-timers and the loan of old and new pictures of trains, towns, lumbering, and mines. Next he will do a book on railroads of New Mexico.

Gifts of junior railbooks, new or used (also other children's books) may be sent to William D. Scott, Rust College, Holly Springs, Miss., for libraries being set up by groups of students for Negro boys and girls in Mississippi who are not permitted to use other library facilities. Additional info. may be had from the Council of Federated Organizations, 1017 Lynch Street or P.O. Box 2896, both in Jackson, Miss. 38205.

A book on the Detroit, Toledo & Ironton has been written by Simon E. Herring, clerk to road foreman-trainmaster, New York Central, 932 N. Main St., Bellefontaine, Ohio 43311, but as we go to press he has not yet found a publisher for the manuscript, into which he has put a great deal of conscientious work.

We advise anyone who wants to write a book to get a publisher lined up before he begins the actual writing.

Arizona Highways magazine for July carried a beautifully illustrated article, 14 pages, each page 9x12", on "Arizona Railroads, Past and Present," by Vernon J. Glover, Jr., and David I. Rees. The issue may be brought for 50¢ from Arizona Highways, 2039 W. Lewis Ave., Phoenix, Ariz. 85009.

Coming Events

Oct. 4: Starrucca Viaduct is goal of Capital Dist. RR. Club's fall foliage trip on D&H frt.-only line. Lv. Albany, N.Y., Union Station 9 a.m. EDT. Details available from J. T. Dempster, Box 377, Schenectady, N.Y. 12301.

Oct. 4: Meeting of New Haven RR. Technical Info. Asso. 1:30 p.m. in general meeting room, NYNH&H Railroad YMCA, 140 S. Orange St., New Haven, Conn. Model railroaders and railfans invited. Get details on this organization from Paul B. Boivin, Jr., 319 S. Orange Ave., Livingston, N.J.

Oct. 10-11: "Skunk" trip. Bus trip to Ft. Bragg, Calif. via Highway 1, sponsored by Central Coast Ry. Club. Contact Don Tustin, P.O. Box 783, San Jose 6, Calif.

Oct. 11: LIRR fall foliage tour to Oyster Bay, planting fields, Bayard Arboretum, $5 (kids $2.50), incl. railroad, bus, admissions; lunch extra. Get info. from LIRR at Jamaica station.

Oct. 10, 17, 24, 31: two-day tour to Burlington, Nauvoo, Quincy, and Hannibal via CB&Q Nebraska Zephyr plus motor sightseeing in 3 states; lv. Chicago Union Station 11 a.m. CST, all-expense tour, $31.03 (kids $27.53). Get illustrated folder showing this and other tours from any CB&Q agent.

Oct. 17: season's last Iron Horse Rambles: Phila.-Norristown-West Milton, $11. Reading-West Milton, $8. Reading Co., Reading Terminal, Phila., Pa.

Oct. 23, 25, 30, Nov. 1, 6, 8: Newark Model RR. Club fall exhibition, 2nd floor, 325 16th Ave. (over Green Lantern Inn) at end of PS bus No. 1 (20th St.) from Penn Station, Newark, N.J.

Oct. 24, 25: steam trips on Middletown & NJ Ry.; lv. M&NJ depot at Middletown, off Rte. 17 or via E-L train; lunch at Unionville. Write Empire State Ry. Museum, P.O. Box 536, Middletown, N.Y.

Nov. 1: Budd RDC trip on LIRR Port Jefferson and Oyster Bay branches, sponsored jointly by Lehigh Valley Chapter of NRHS and Trolley Mus. of N.Y. Lv. Jamaica station 10:40 a.m. EST. Lunch and photo stops. Bus to T. Roosevelt's home. Fare, about $6. Contact Ernest Kovacs, 416 2nd Ave.,

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Nov. 2: December issue of Railroad Magazine hits the news-stands.

California Shortlines

Additions and corrections for our California shortlines roster (Aug. '64) come from Ron Sims, Bryan Griebenow, Al Miller, Kurt Stephens, and J. Buckley.

Modesto & Empire Traction owns three GE 600-hp 70-tonners, numbers 600-602, with B-B wheel arrangements, tractive effort 35,000 lbs., weighing 140,000 lbs. and built in 1947, '49, and '52.

Santa Maria Valley locomotives 10, 20, 30, 40, and 50 were built 1948-'52. No. 60 is probably a U6B.

Ventura County No. 1 is a GE 70-ton 600-hp B-B unit with tractive effort of 35,000 lbs., weight 140,000 lbs., built in 1948. No. 2 is a Baldwin 2-6-2, built in 1922. No. 3 is a 380-hp Whitcomb 45-ton B-B, built in 1949 as Garden City Western 101.

Pacific Electric 1647 was sold to National Metals and renumbered 503.

Almanor Railroad 106 is a 44-ton GE rated at 380 hp, with a B-B wheel arrangement, 22,000 lbs. tractive effort, and weight 88,000 lbs. Built in 1947 and has been sold.

No. 166 is a 700-hp GE 70-ton B-B unit with a tractive effort of 41,300 lbs., weight 140,000 lbs., lettered Collins Pine Co.

Amador Central owns a GE 44-tonner, No. 8, built in 1945, rated at 380 hp with a B-B wheel arrangement, tractive effort 26,500 lbs. and weight 88,000 lbs.

Arcata & Mad River owns two GE 44-tonners, numbers 101 and 102. Each is rated at 380 hp, with B-B wheel arrangement, 26,500 lbs. of tractive effort, and weighing 88,000 lbs. Built in 1950, they are ex Pine Flat Dam Contractors units. No. 103 is a Whitcomb 70-ton unit with B-B wheel arrangement, tractive effort 35,000 lbs., weight 140,000 lbs. It is ex U. S. Navy, then Hyman-Michaels No. 7. Sold to Fromko Railroad Contractors. Nos. 104-105 are 380-hp GE 44-tonners with B-B wheel arrangement, tractive effort 26,500 lbs., weight 88,000 lbs. No. 105 was built in 1942. They are ex Fernwood, Columbia & Gulf D3 and SP 1901.

Feather River No. 91 is a 3-truck Shay with tractive effort of 38,200 lbs., weight 186,000 lbs.

Yreka Western 18-19 is ex McCloud River 18-19. No. 601 is ex Bamberger 602.

Sacramento Northern 141 is a 44-tonner, ex Napa Valley 40. In 1956 it was sold to GE in trade on SN 202 and rebuilt to Springfield Terminal No. 1. Lawrence Jackman tells us that the weight and tractive effort of UP 620, 621, 620B, and 621B were 274,760 and 68,690 lbs. respectively. Note 77 should indicate that 1451-1461 were originally 964A-968A and 905-910. Nos. 964A-968A were subsequently renumbered 900-904. Note 78 should indicate that 1451B, C-1458B, C were orginally 969B-978B, 905B, C, 907B,C, and 909B, C. No. 969B-978B were later renumbered 900B, C-904B, C.

Warren Calloway corrects a typographical error in our North Carolina Shortlines roster in that Aberdeen & Rockfish 201 became RF&P 1111. Our note on A&R 200 should read that it was traded in on 300. Atlantic & Danville 101-102 were traded in on 1-2. Durham & Southern owns an 80-ton Porter, No. 500, ex U.S. Navy 65-00141, acquired Oct. '62. ●

PERSONALITIES. John Hyland, a truck driver, fastened a winch to a section of British Railways track near Seaford, England, in an effort to pull his truck out of the mud. The vehicle did not move, but one rail was pulled six inches out of line. Hyland was arrested on charge of obstructing a train.

Roy E. Davidson, grand chief engineer of the International Brotherhood of Locomotive Engineers, died last July at the age of 63, a few days after he had written us a personal letter pointing out that the new Civil Rights law would not affect the qualifications for membership in his brotherhood. Roy began railroading as a New York Central fireman when he was only 16.

"The Rev. Mother Agatha holds a boiler certificate, as *Railroad Mazagine* stated recently, but she cannot operate a steam locomotive nor is she authorized to do so," writes J. Goodman, 173 Royal Parade, Parkville, N2, Victoria, Australia.

Shortlines of Delaware & Maryland

Locomotive rosters compiled by Sy Reich

Baltimore & Annapolis Railroad

Road Nos.	HP	Builder	Builder's Model	Wheel Arngt.	Tractive Effort	Weight	Date	Notes
50	600	GE	70-ton	B-B	35,000	140,000	1950	

Baltimore & Eastern Railroad

Owns no equipment; uses Pennsylvania Railroad locomotives.

Canton Railroad

20	600	GM-EMC	SC	B-B	49,000	198,000	1937	1
21-26	600	GM-EMD	SW1	B-B	49,500	198,000	1941-9	2
30-31	1000	Baldwin	VO 1000	B-B	?	?	1944	3
40-43	800	GM-EMD	SW8	B-B	61,800	247,300	1952-4	4
44-48	900	GM-EMD	SW900	B-B	62,000	248,000	1956	

East Washington Railway

101	300	GE	45-ton	B-B	22,500	90,000	1946	
102	300	Whitcomb	65-ton	B-B	32,500	130,000	1944	5

Maryland & Pennsylvania Railroad

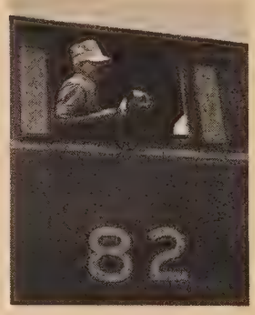
70	600	GM-EMD	SW1	B-B	49,000	?	1946	6
80-81	1000	GM-EMD	NW2	B-B	62,500	?	1946	6
82	1200	GM-EMD	SW9	B-B	62,500	?	1951	

Patausco & Back Rivers Railroad

101-103	600	GM-EMC	SC	B-B	?	?	1937	
104	600	GM-EMC	SW	B-B	?	?	1937	
106	600	EMC	SC	B-B	?	?	1937	7
107	600	GM-EMC	SC	B-B	?	?	1937	
108	600	EMC	SC	B-B	?	?	1935	7
109	?	GM-EMD	?	?	?	?	?	
125-134	1200	GM-EMD	SW1200	B-B	?	?	1956-7	
151-154	600	GM-EMD	SW1	B-B	?	?	1940-1	8
200-206	660	Alco	HH 660	B-B	?	?	1937	9
300	1000	Baldwin	VO 1000	B-B	?	?	1940	10
301-302	660	Baldwin	VO 660	B-B	?	?	1941-2	
306-309	660	BW	DS 4-4-6	B-B	?	?	1946	
325-332	1000	Baldwin	VO 1000	B-B	?	?	1940-5	10, 11
335	1200	BLHW	S-12	B-B	?	?	1953	12
336	1000	Baldwin	VO 1000	B-B	?	?	1942	
337-344	1000	BW	DS 4-4-1000	B-B	?	?	1948-9	
345-347	1200	BLHW	S-12	B-B	?	?	1951	
351, 353-358	1000	Baldwin	VO 1000	B-B	?	?	1940-3	13, 11

Rosters based on data from M&P master mechanic, PRR manager of community relations, and Canton RR. are generally accurate as of June 30, 1964; but our P&BR listing was not supplied by the railroad and is likely to be inaccurate as well as incomplete. For our roster purposes, a "shortline" is a railroad listed in either the Official Guide or the Pocket Handbook of Railroad Officials, or both, and is less than 400 miles long.

(1) Sold to Republic Steel.
(2) Canton 26, ex Richmond, Fredericksburg & Potomac 50, purchased 5/56.
(3) Canton 30, 31 sold to P&BR. Baldwin data indicates no renumbering, but other info. suggests they were renumbered 331, 332.
(4) 40, 41 sold to Wheeling Steel, renum. 1153, 1154.
(5) Ex U. S. Army.
(6) M&P 70, 80 sold to Republic Steel.
(7) P&BR 106, 108 ex DL&W 426, 425.
(8) P&BR 151-154 ex Phila., Bethlehem & New England 13, 15, 17, 18.
(9) P&BR 200-206 sold.
(10) P&BR 300 renumbered 325.
(11) P&BR 329 (1st) renum. 351. P&BR 329 (2nd) ex Union RR. 500. P&BR 331, 332 ex Canton 30, 31.
(12) P&BR 335 ex something (?).
(13) P&BR 351 listed in one source as ex P&BR 329 (1st) but in another source as a separate different unit. P&BR 353-358 ex Union RR. 505, U. S. Army (?), Pittsburg & W. Va. 30, U. S. Army 7464, Union RR. 501, U. S. Army 7461. ●



John Whiteford, yard engineer, in the cab of a Ma & Pa diesel with Jacky, the road's mascot.

Photo by James P. Gallagher, 1 E. Highfield Rd., Baltimore, Md.

July 23, 1964: old Canadian Pacific 4-6-2's stand on a siding at Newport, Vermont, on way to Nelson Blount's Steamtown U.S.A. in Bellows Falls, where they will be put into working order and go on display. Montreal built engine 1246 (right) in 1946. Canadian Locomotive Co. built No. 1293 (background) in 1948.

Robert T. Baldwin, 56 Spring Hill Terrace, Spring Valley, N.Y.

SWITCH LIST

THESE items are published free and in good faith, without guarantee. Keep within 28 words, including your name and address. Use abbreviation such as *tts.* (timetables); *emp. tts* (employees timetables), and *SSE* (send 5¢ stamped envelope for list or details).

A tight printing schedule compels us to close the *Switch List* long before publication date. As this magazine hits the newsstands our Dec. department is already closed. Entries for January issue (out Dec. 1) should reach us before Sept. 17. Address Sy Reich, *Railroad Magazine*, 205 East 42nd Street, New York, N.Y. 10017.

JOHN AARDEMA, 223 Slater St., Paterson, N.J. seeks info. on steam loco Roger Williams.

Miss ANNIE ADAMS (age 16), Rte. 1, Traphill, N.C., wants to hear from readers.

Mrs. EVE ARELLANO (age 57), 1622 S. Halsted St., Chicago, Ill., desires pen pals.

AVROM BASSETT (age 16, CNR station agent's son), Box 83, Willow Bunch, Sask., Canada, wants pen pals.

WALLACE BECK, 534 N. 2nd St., Quincy, Ill., interested in pen pals.

RON BELZER (age 16), Rte. 1, Excello, Missouri, wants teen-age pen pals.

ROGER BOISVERT, 2231 2nd Ave., Trois Rivieres, Que., Canada, wants pix any size of CN 1014, 1017, 1018, 1153, 1160, 2101, 2118, 2123 and CP 3051, 3413, 3414, 3416, 3419, 3436, 3451, 3459.

DAVE BOWER, 9 Council Trail, Indian Field, Wilmington, Dela. 19803, seeks railroadiana. (What kind, Dave?)

JERRINE BOYERT, Sprague ville, Iowa, wants to hear from readers.

MARION BRASHER, 109 St. Paul, Spring Valley, Ill. 61362, wants trainmen's hats, badges, lapel pins, uniforms buttons.

O. W. BROOKS (sec.-treas. of BMWE Lodge 3072), Box 187, Emporium, Pa., will trade 28 copies of Railroad Magazine, '49-'51, plus June '55 Off. Guide for book "Down Brakes" by Robt. Shaw.

RAY CANNON, 5554 Ashbourne Rd., Baltimore, Md. 21227, buys b&w or color pix, negs., slides BTC, DCT.

L.D. CHAMPION, 500 Case St., Rochester, Pa. 15074, sells diesel and steam pix NYC, P&LE, PRR, etc. (SSE).

KEN CHEATHAM, Rte. 1, Box 35, Springhill, La., wants teen-age pen pals, any country, either sex.

R.W. CHILCOTE, 706 Johnson Ave., Pedford, O., wants NOT&L tts., tkts., passes, uniform buttons, cap badges, etc.

BEVERLY CHILDERS (age 18), Rte. 2, Rushville, Missouri, wants pen pals.

KAREN COLE (age 19), 702 N. San Joaquin St., Stockton, Calif., wants pen pals.

F.L. CONNARO, 198 North St., Buffalo, N.Y. 14201, will sell Railroad Magazine '39-'62, none clipped.

Miss ANNA COOK (age 22), 11 Central Ave. W., Ashville, N.C., wants pen pals.

J. COTT, Carrick, Otranto Pl., Sandycove, County Dublin, Ireland, wants Baldwin catalogs 25-26, 28-36, 38-46, 48-51, 53-60, 62-69, 71, 74-80, 82-88, 90, 93-95, 97 up.

A.H. COVERDALE, 140 Hendon Dr., Calgary, Alta., Canada, sells size 616 CP diesel negs. Wants size 616 CP, CN, other Canadian steam negs.

WARREN CRATER (CNJ engr.), 270 W. Colfax Ave., Roselle Park, N.J. 07204, sells copies of his "CNJ Album," $3.25.

ART CURTIS, 1644 Taylor St. 33, San Francisco, Calif. 94133, will sell "S.F. Mkt. St. Ry. Transfer Rule Bk.", "Motorman Training Manual of 1943," mint cond. (SSE)

RAY DESCHENES, 30 Mohawk Rd. W., Hamilton, Ont., Canada, sells 3½x5 to 11x14 steam pix CN, CP. Buys steam negs. CN, CP, TH&B. List 10¢.

DAN DICENZO, 39 Lockmere Rd., Cranston, R.I., sells tts. (SSE)

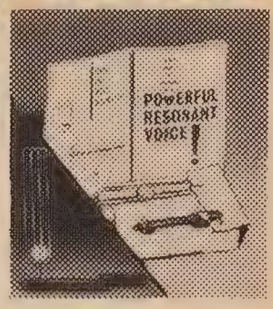
LARRY EASTON, 510 Reed St., Neenah, Wis., will buy pix, negs., or slides Sandy River & Rangeley Lakes engine 8, Bridgton & Saco River 6.

M. EMERY, 1001 E. Colorado St., Pasadena, Calif., wants pen pals.

AMAZING INVENTION QUICKLY HELPS GIVE YOU

a Strong, Manly Voice

that commands attention, wins respect and persuades others!



NOT A BOOK, BUT A REMARKABLE DEVICE AND SHORT CUT METHOD GUARANTEED TO GIVE YOU A RESONANT, WINNING VOICE AND CLEAR ARTICULATE SPEECH.

I don't care how well or how poorly you think you now speak. I unconditionally guarantee that by using my "Voice Resonator" and unique methods you'll quickly find and develop your "hidden voice". I guarantee this voice to be richer, more powerful and resonant . . . mellower, more interesting and persuasive than the voice you are now using. What's more, this new voice will be breath controlled, capable of longer sustained speech, won't tire easily, and will be clearer and easier to understand.

ACTUALLY HEAR THIS NEW VOICE IN 3 MINUTES!

Yes — in just 3 quick minutes, you'll feel and hear this "hidden voice" break thru. You'll be delighted to find how easily you can use this new voice to gain commanding speech.

ENRICH YOUR BUSINESS AND SOCIAL LIFE!

This invention and methods may change your life. Business associates, customers and employers listen with respect to authoritative, deep-toned speech. Women sit up and take notice of an interesting, manly voice. Your confidence and ability will soar as you apply this new voice. Women too, can use this kit to strengthen and change their voice pitch to a more pleasant sounding level . . . and to improve speech and pronunciation habits.

CLEARER ARTICULATION IS YOURS . . . AUTOMATICALLY!

As soon as you use your new, breath controlled voice you'll find you automatically improve rhythm and diction. Such common speech defects as slurring, mumbling, rapid speech, dull monotone speech and fade-away speech disappear.

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Your voice can release your personality, or lock it in. I have seen apparently dull people find their "hidden voice" and become transformed into vibrant, interesting people. I have watched nervous people become more relaxed . . . and, as happened to me, saw timid people use their new voice to break the chains of self-consciousness and fear of others and achieve new confidence, freedom and happiness.

TRY IT 14 DAYS WITHOUT RISK — FULL GUARANTEE!

You owe it to yourself and loved ones to examine and use this now. I make you this honest, no risk guarantee — without trick wording or conditions. Use it for 14 days. If you, your friends, family and business associates aren't impressed with your clearer, richer more powerful speech . . . with your more resonant voice that holds attention and commands respect . . . then simply return the "kit" for a complete refund. Speech courses using ordinary methods cost from $50.00 to $250.00. This unique kit, complete with the "Voice Resonator," short cut methods, and the "Articulation Developer" — all for only $4.95 ppd. Order now and I'll include the fascinating "Breath Control Tester Cage" absolutely FREE. This valuable accessory lets you actually see your progress — it helps you gain tireless, sustained speech. Don't delay . . . "Silence is golden . . . but a rich, resonant voice is a treasure beyond compare" . . . and can be yours without risking one penny.

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95 Madison Avenue, New York 16, N.Y.

I enclose $4.95, send the Voice Kit for a 14 day Free trial. If not delighted, I will return it for a prompt and full refund. (Sorry no C.O.D.)

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7868 Willoughby, Hollywood 46, Cal.

TO: EDDIE RIO & ASSOCIATES, Dept. 2626
7868 Willoughby Ave., Hollywood 46, Calif.

YES! I am interested in participating in your new Hollywood Talent Search. I am enclosing a brief description of myself along with my photo and .25¢ to cover postage and handling. Please rush all information.

Name_____

Address_____

City & Zone_____

State_____

Meet *Railroad's* new assistant editor, Arthur T. Knowles of Brooklyn, N.Y., dressed for railfan trip. Art is a retired Westinghouse statistician and serious student of railroading; be belongs to a dozen fan clubs, has been writing columns for years for some of their magazines, and has gone on more railfan jaunts than anyone else we know. His friendly manner and expert knowledge make him a real asset to our staff.

ORVAL EWELL, 647 S. Worth St., Indianapolis, Ind., wants pen pals.

FRANK FAUST (tkt. seller), 319 Huntington Ave., Boston, Mass. 02115, will mount in plastic rr. passes, loco snapshots, etc. (SSE.)

ANGELO FIGONE, 1534 28 Ave., San Francisco, Calif. 94122, wants any size pix unusual diesels on NWP, info. on leased locos, equip., S.F. Muni Ry. Trolley Topic Mag. around '48.

BOB FIRTH, 530 Roosevelt, Fresno, Calif., wants to hear from readers.

W. FLATT, 805 Lowther Ave., Toronto 5, Ont., Canada, wants pix Toronto & York Metro. Div. carbarns, stations, substations, bridges, etc. for modeling purposes.

TOM FRANCIS, 702 Railroad St., Ipsilanti, Mich. 48197, wants info., pix NYC green cabooses. Sells tts.; no list.

JACK FRESEO, SP engm., 4309 Edenhurst Ave., Los Angeles, Calif. 90039, sells steam pix embossed in copper. (SSE)

CHAS. FROMART, age 65, brakeman or switchman, last heard from in '38 at Detroit, contact your sister, Mrs. R. J. Dyer, Augusta, Mont.

Miss NANCY GEORGE (age 16), 400 Snead Fairway, Portsmouth, Va. 23701, wants pen pals.

BILL GALLAGHER, 4125 Madrona Rd., Riverside, Calif. 92504, buys and swaps transportation buttons, insignia, emblems: rr., streetcar lines, military.

GENE GORDON, 1320 Line St., Sunbury, Pa., will sell illus. booklet "Jersey Shore & Antes Fort Ry."

Miss VERA GUSTENBERGER, R.R. 1, Coatesville, Ind., wants any rr. man or his wife as pen pal.

TOM HAHN, 127 W. Central Ave., Moorestown, N.J., sells back issues Mdl. RRer, emp. tts., Off. Guides, P&R '27 mint emp. tt. (SSE)

TOM HARPER, 6066 Reinhart St., Philadelphia, Pa. 19142, sells and trades orig. Kodachrome slides PRR E2b, E3b, GG1, E44, MU's, PTC, PST trolleys for others.

TOM HARVEY, Central Coast Ry. Club, Box 783, San Jose, Calif., wants info. on 2 Adlake kerosene marker lamps stolen recently from obs. car Ferroequinologist in SP Oakland yard.

DON HAYWARD, 38 Monastery Ave., West Springfield, Mass., sells pix Northeast and Canadian steam, pass. car, pix. List 25¢.

Mrs. HARRY HEMMINGS, 60 High Pt. Rd., Westport, Conn., wants info. on Shepaug RR.

KARL HENKELS, 1628 N. Oakley Ave., Chicago, Ill. 60647, sells, trades 35mm Kodachrome orig. slides diesels, cabooses, interesting cars. Buys collections of rr. slides.

S.E. HERRING, 932 N. Main St., Bellefontaine, O. 43311, wants pix, tts., stories on DT&I for book he is writing. Wants pix TA&W 4-8-0 20, St. Joseph Valley Line tts.

JOHN HIRSCH, 2574 W. 22nd St., Erie, Pa. 16506, sells pix B&LE, NYC, NKP. List, sample 20¢.

JOHN HODSON, Britt, Iowa, sells 5x7, 8x10 pix MILW, C&NW, M&SL,-CGW, IC, steam, diesel. Wants any size steam negs. of above.

Miss DOROTHY HOGE (age 16), Box 136, Mullens, Va., interested in pen pals.

Miss LINDA HOWARD (age 16), Rte. 1, Box 354, Portsmouth, O., wants pen pals.

JOHN HOWELL, RD 2, Box 45A, Farmingdale, N.J. 07727, sells 3½x5 color diesel Pix RDG, CNJ, PRR, LIRR, etc.; also RDG T-1's. (SSE)

CLIFF HULL, 203 E. 16th St., North Little Rock, Ark., will sell Meyer's "20th Century Manual of Ry. & Commercial Telegraphy." Wants steam action pix.

BOB INGHRAM, Box 194, Chesapeake, O., 45619, seeks pix, negs., recordings of Kellys Creek Ry.

Miss PEGGY ISER (age 23), 28 Silver St., Ridgeley, W. Va., wants pen pals.

Mrs. A.M. ISMES, Box 364, Lebanon, Ore., interested in Pen pals.

C.W. JERNSTROM, 822 Pelham Dr., Ft. Wayne, Ind., sells steam loco pix, negs., all sizes, most U.S. and Canadian rrs. (SSE, specify which rr.)

ARNOLD JOSEPH, 2512 Tratman Ave., New York, N.Y. 10461, sells old issues Railroad Magazine, Trains, R&LHS Bulls., model mags., etc. (SSE) Buys collections of such mags., good cond.

STEVE KAY, 1146 Eastwood Ave., Cleveland, O. 44124, wants pix, info. on famous trs.; also UP tts. and pix.

HARRY KELSO, 108 E. 3rd St., Pittsburg, Kan., sells rr. mdl. mags.; buys, sells back issues Railroad Magazine.

JIM KERR, 4261 De La Savane, Montreal 9, Que., Canada, sells rr. bks., Canadian bldrs. plates. (SSE)

Mrs. MARGE KITCHEN (age 40), 9936 Saratoga Dr., Caledonia, Wis., wants pen pals.

TIM KOUPAL, 443A Donnelly, Columbia, Missouri, sells BAR pix. Buys BAR, MEC pix, rosters, info.

Mrs. LILLY LANAHAM, Rte. 1, Box 154, Lake Lynn, Pa., desires pen pals.

FRANK LANSHCAK, 50 18 St., Sharpsville, Pa., wants pix, drawings, Sharpsville & Oakland wooden-bodied coach and bag. car.

Miss RUTH LATTRALLE, 1500 Fifth Ave., Watervliet, N.Y., wants to hear from anyone interested in rr. and poetry club.

A. LA PRESTO, RD 1, Peck St., Stamford, N.Y. 12167, wants negs. logging rrs.; bldrs. pix of Shays. Sells, trades engs. D&H, British Rys., etc.

JAY LENTZNER, Rte. 1, E. Troy, Wis. 53120, wants any size negs., pix, slides of last CNS&M trs. arriving at Chicago or Milwaukee; also certain CNS&M tr. orders.

F.W. LUSTGARTEN, 298 Centennial Ave., Roosevelt, N.Y. 11575, wants bldrs. drawings of PRR S-1, S-2, Q-1, Q-2, T-1.

C.B. MEDIN, rr. photographer, contact R.H. Carlson, Box 222, Combes, Texas.

HENRY MERCUR, 3020 Midvale Ave., Philadelphia, Pa. 19129, sells elec, ry. emp. tts., promotional material, transfers, steam travel folders, emp. tts., passes. Off. Guides. List free.

Mrs. RAY MICHALEK (section man's widow), Box 136, Thorp, Wash., wants to hear from wives or widows of section men.

DICK MILLER, Box 248, Peterboro, N.H., wants teen-age pen pals interested in B&M, MEC, CP, GT, PT, CV. Trades B&M roster for railroadiana.

WARREN MILLER, Box 92, Oakland, Calif., buys, trades for any size action negs. West Coast Interurbans esp. NWP, SN, SFNV, PE, PEPCO.

WM. MILLER, 703 Norden Dr., Pittsburgh, Pa., interested in pen pals.

WM. MOLL, 301 Locust Lane, State College, Pa. 16801, wants orig., dupl. color slides trolley systems abandoned before '56, non-PCC SLPS trolleys.

L.D. MOORE, Jr., 121 Flagg Rd., Deep Creek, Chesapeake, Va., sells pix, negs, sizes 116 and p.c. of steam, elec., tts., also Railroad Magazine, Trains, calendars, etc. List 20¢.

Mrs. VIRGINIA MOORE, Box 2004, Cradock Br., Portsmouth, Va., will sell her late husband's 50-yr. collec. of railroadiana, incl. tts., passes, rule bks., Railroad Magazine, switch keys, etc. List 25¢.

JOHN NELSON, 71 Humphrey Dr., Syosset, N.Y. 11791, sells D&H negs., pix steam, diesels, technical info., rosters.

JOHN NICHOLSON, 6213 E. Calle Rosa, Scottsdale, Ariz., buys orig. and dupl. CA&E slides.

DAVE ODEN, 8931 S. 79th St., Franklin, Wisc., buys TMER&L interurban, city line pix.

W.R. OSBORNE, 1019 S.E. 12th Ave., Deerfield Beach, Fla., seeks pre-'30 B&O still, action pix, steam diagrams. Ivan Saunders, please contract.

JOHN PARKER, Rte. 1, Box 106-G, Aiken, S.C. 29801, wants G&F steam pix.

W.R. PARKER, 4228 Market St., Youngstown, O., wants to hear from readers.

C,G. PARSONS, 123 Riverdale Rd., Liverpool, N.Y. 13088, sells Kodachrome 35mm duplicate slides steam, diesel, trolleys. Sample 25¢.

PHIL PERKINS (age 16), 1681 Rosemont Rd., Portsmouth, O., seeks pen pals.

Mrs. MARY PIKE, 309 N. Main St., Grant Park, Ill., wants pen pals.

JOE QUINN, Box 1044, Tillson, N.Y. 12486, buys orig. steam negs., most rrs.

JOHN QUINN, 39 Foxhurst, Manhasset, N.Y. 11030, will sell Kratville's "Steam, Steel and Limited" with suppl.

WALT REDMAN, 2171 McLain St., Lincoln Park, Mich. 48146, buys, sells Off. Guides, p.c. size steam pix. Buys rr. depot postcards. (SSE)

DAVE REPETSKY, 3430 Tyler N.E., Minneapolis, Minn. 55418, sells size 120 negs. and 35mm Kodachrome slides of diesels, cabooses, etc., on approval. List 30¢ and SSE.

ART RICHARDS, 21 Briarfield Rd., Tyseley, Birmingham, England, wants to renew friendships with railfans in U.S.

W. ROBBINS, Box 805, Palestine, Tex., wants pen pals interested in railroading.

VIC RUCKLIN, 4 Hudson Rd., Bellerose, N.Y., sells NYCTA pix, metal destination signs, number plates, lanterns, controller handles, etc. (SSE)

STEVE SCALZO, 5305 Belcrest Ct., Peoria, Ill., sells, trades dupl. and orig. color slides SLPS, NOPS for TTC, PTC, MTA, PSCT, BTC.

Mrs. FRANCES SCHLEE, 23 Oak St., Port Monmouth, N.J., seeks pen pals.

M.A. SCHLENKER, 733 Washington St., Allentown, Pa., wants to hear from readers.

J. SHAFER, 4359 Lafayette, Evansdale, Iowa, wants rr. postcards, rr. stock certificates, rr. letters, bks., express co. material.

AL SHARP, 100 Shennecossett Pkwy., Groton, Conn., wants pre-'46 rr. tourist guides, tts., maps, bks., toy train catalogs. Sells rr. guides, rulebks., souvenirs. List 10¢

DICK SHIDELER, Rte. 3, Box 120, Manteco, Calif., trades good quality sizes 120 and 616 SP diesel negs. for same. Also wants SP steam negs.

CLARENCE SMITH (Pullman condr.), 122 Elm Ave., Long Beach, Calif., wants pen pals.

J.F. SMITH, 17638 Roosevelt, Homewood, Ill., will sell rulebks., switch keys, pix of P&R 2-8-0 82, Off. Guides.

ROMAN SOROR, 217 Niles St., Elizabeth, N.J. 07202, wants info. on disposition of CNJ PD30 diesels.

FRED STEPHENS, Box 263, Moncton, N.B., Canada, trades B&W diesel b&w pix and negs., sizes 116, 120, CN, GTW, DW&P, CP.

WM. STEWART, 53 Betsy Lane, Ambler, Pa., wants info. on grandfather, James M. Stewart, railroader of Lynchburg, Va., around '02, presumably killed in rr. wreck in '04.

Mrs. ALLEN STIDHAM (age 80), 814 N. Turner Ave., Hazard, Ky., wants pen pals about her age.

TED THOMPSON, Jr., 2006 Blaine St., Williamsport, Pa. 17705, wants PRR tr. orders, air slips, wheel reports.

LES TUTTLE, Box 191, Rural Hall, N.C., will trade p.c. size SOU, N&W, WSS steam pix for any size pix B&O steam, diesel, equipment.

BART WALKER, Jr., 564 Market St., Paterson, N.J., buys ICC accident reports pre-3800, 3800, 3899, 3910, 3916. 3917, 3958, 3959.

WALT WEART, 10411 Diversey Ave., Melrose Park, Ill. 60164, sells 3½x5 pix CNS&M, CA&E, CSS&SB, CTA, NKP, CB&Q steam. (SSE)

OTTO WEISS, 32-52 34 St., Long Island City, N.Y. 11106, sells all size rr. pix.

MIKE WHITE, c/o Lt. Col. L.H. White, Personnel & Admn. Div., H.Q. APO 55, New York, N.Y., wants B&O, L&A, SP, CCC&SL negs. and color slides.

FRED WILLIAMS, 55 Brookside RD., Newington, Conn. 06111, wants 3 dimensional paperweights, steam, diesel, elec., 1/10" to foot scale.

Miss DELAPHENE WOOD (age 17), Box 5, Meta, Ky., wants pen pals.

Mrs. MARGE WORKMAN, 623 E. 7th St., Momence, Ill., wants to hear from readers.

Model Trading Post

DON HAYWARD, 38 Monastery Ave., West Springfield, Mass., will sell 0 gage NYC 4-8-2. (SSE)

CASE KOWAL, 6615 S. Bell Ave., Chicago, Ill., will sell Lionel loco 1666 and frt. cars. (SSE)

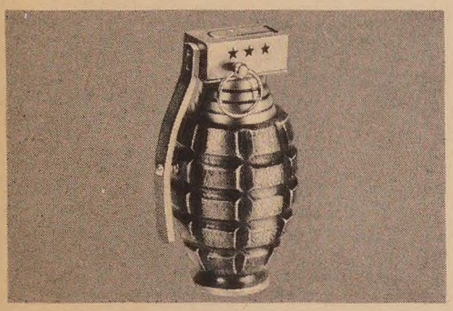
ALDEN MILLER, 3212 34th Ave. S., Minneapolis, Minn., wants S gage trains, trolleys, accessories, catalogs; also Erector sets '48-'64 era.

L.D. MOORE, Jr., 121 Flagg Rd., Deep Creek, Chesapeake, Va., will sell Lionel, AF, Marx, Bing trains, catalogs. List 10¢ stamps. Wants Scalecraft 00 gage 0-6-0.

BOB WALLICH, 310 Ottawa St., Washington, D.C. 20021, wants Buddy L cars, track, esp. hopper car. Will buy 3¼" gage live steam loco. Sells Hamo HO trolleys. ●

men's mart

All products shown here may be obtained directly from indicated sources. Send check or money order with your order. Manufacturer will refund full purchase price on prompt return of unused, non-personalized lines. This department is not composed of paid advertising.



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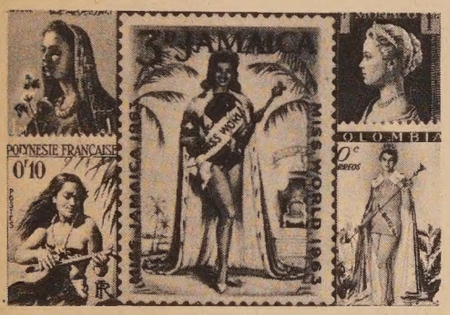

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700	32.10
900	40.23
1,000	44.24

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*Amount you want to borrow $*_____

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ARTIST'S CONCEPTION

NORTON PRODUCTS
Dept. 281,
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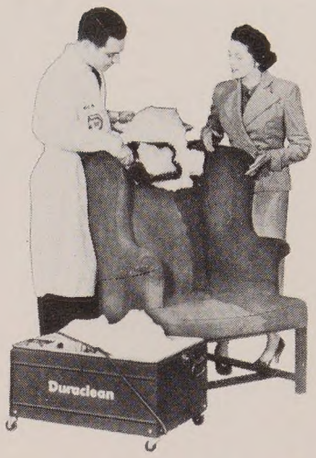
New York's beautiful Penn Station, photographed last April, no longer looks like this; the building is being torn down.
William E. Warden, Jr., 1216 Shamrock Lane, Waynesboro, Va.

Would You Like to Take in $140 after Supper?



This is exactly what L. Burnett did while still employed. Here are his own words:

> *"I worked at my Duraclean business part time until I saw that I could make as much in a week as my job paid for a whole month. One night, after supper, I took in $140. Since going full time, I've had single jobs running $300 and more."*

Mr. Burnett and one helper serviced this $140 "after-supper" job. The national price guide provides a Duraclean dealer a gross profit of $6 per hour on EACH serviceman plus $9 per hour on any service he himself renders. Your income is limited only by the number of servicemen you employ.

To own a business is much easier than you think. We show you how . . . step by step. The 24 page fully illustrated booklet we'll mail you (with no obligation) explains how most of your gross profit becomes a *clear net profit* to you.

Start while Continuing Present Job

We furnish all the equipment...and help finance you

If you've wanted to BE YOUR OWN BOSS . . . to become financially independent . . have a fast growing income . . and own a Nationally Advertised business, now YOU CAN.

You can stay at your present job while your customer list grows . . then switch to full time, lining up jobs for your servicemen to do.

One small job a day brings a good starting income. As you add full or part-time servicemen, your income is limited only by your own effort.

Dealers operate from a shop, office, or their home. Equipment is portable . . the electric Foamovator converts to a convenient carrying case.

At the start, you may want to render service yourself . . . or you can start out with servicemen. This business is easy to learn . easy to start . . so easy to service that women dealers often do it. We prefer you have no experience . . not have to "unlearn" old methods.

We are NOW enlarging this worldwide system of individually-owned service businesses. If you are reliable, honest and willing to work to become financially independent, we invite you to mail the coupon.

It's Easier than You Think to Start Your Own Business

When you receive our illustrated booklet, you will see the way we show you **step by step** how to quickly get customers . . . how to steadily build more customers from their recommendations.

All six services are rendered "on location" in homes, offices, hotels, theaters, churches, clubs, motels and institutions.

These superior, safer and convenient methods spread Duraclean dealerships throughout North and South America, Africa, Portugal, England, Israel, Norway and many other countries.

National Magazine advertising explains the superior merits of your services, builds your customer confidence and brings job leads to you.

We and a Duraclean dealer will train you and assist you. He'll reveal his successful, proven methods. We show you all you need to know.

You have pre-tested newspaper and yellow-page ads, commercials, and a full mailing program.

Furnishings stores, insurance adjustors, and decorators refer jobs to our dealers. These year 'round services are in constant demand.

TODAY is the time to reserve a Duraclean dealership . . before someone takes your location.

Start Small, Grow Big . . . in this Booming Business

Many men have said to us, "I can't afford to give up my job till I know I have a sure thing . . . a sound business that will provide both security and a better living for my family."

That made sense to us so we worked out such a plan . . . and those same men are now enjoying Duraclean dealerships in many communities. You don't experiment. You use **tested, proven** methods. **You have our backing and "know how."**

Does this appeal to you? Don't decide now. Mail the coupon so you'll have the facts to decide wisely. There is no obligation whatsoever. You will then know whether this is what you want.

You can start small and grow big just as we did. A third of a century ago Duraclean was an idea . . . but it caught fire and spread rapidly to a worldwide service. It spread because it was based upon (1) **superior processes** and (2) **proven customer-getting methods.**

Our first service, the care of carpets and upholstery, exemplifies these superiorities. It not only cleans; it enlivens the fibers . . . revives dull colors. Pile rises with **new life.** Furnishings are used again in a few hours.

There's no machine scrubbing. No soaking. Duraclean cleans by absorption. Mild aerated foam lightly applied, lifts out dirt grease and many unsightly spots like magic.

Government figures show service businesses growing faster than industries and stores . . . $750 million yearly potential just in rug and furniture cleaning. You have **5 other services.**

Space here will not permit describing your other services but they are fully explained in the free booklet we'll mail you. You have six opportunities for profit on every job.

A few hundred dollars establishes YOUR OWN business. A day's profit more than takes care of the monthly payments we finance for you.

Men frequently take in partners.

We furnish electric equipment and enough materials to **return your TOTAL investment.** If you have good habits and know the importance of customer satisfaction, you can likely qualify for a Duraclean dealership.

It's been said, "Opportunity knocks but once at every man's door." This could be that one rare opportunity in **your life.**

It is surprisingly easy to learn this business. You can decide from the information we will send you whether to apply for a dealership. So, with no obligation whatever, mail the coupon TODAY.

Own a Nationally Advertised Business

•

Your Services Are Endorsed by McCall's Magazine, Amer. Research & Testing Laboratories and by leading Carpet Mills & Furniture Makers

•

What Dealers Say:

Langdon Lawson: National advertising is tops, creates leads. In September, working alone, jobs totaled $1,475.

R. C. Blue: Customer called a prominent competitor. They said they could not clean her badly soiled furniture . . . . to contact me, "if anyone could get it clean, I could"

Charles Randal: Business keeps growing. Made as much as $120 in one day.

D. Kern: Duraclean's proven-best process and the continuous help from headquarters gave me a big jump on all competition.

George Byers: For University, my total billing was $2,416. Total expenses $814.

Gerald Weihrauch: Three persons called me saw Duraclean advertised in magazines.

Edward Hoy: A smoke damage insurance claim bill was $186. All work was done by me in exactly 8 hours and 2 minutes.

John Hoak: I've never worked at anything I enjoyed more than Duraclean.

W. C. Smith: Earned $650 one week. Volume keeps getting bigger.

Service man for dealer **C. Weed:** Furniture was filthy black. When through, I was amazed how clean.

John E. Frost: First 2 months I grossed $1,000 part-time.

Loren Farris: I'm proud to be independent at 30. I wish I had known about Duraclean earlier.

Earl Davis: Our sales increased $17,660 this year.

Ed. Kramsky: In 2 years, I now have two assistants, a nice home and real security for my family.

Resale Service

If, because of illness, moving or for any reason a dealer wants to sell, we maintain a service to locate buyers and to help him sell.

Dealerships resell at up to 10 times the dealer's cost. R.D.K., after 5 months, sold for $2,000 above his cost. L.L., after 30 months, got $7,116 more than he had paid. The value of your dealership and franchise grows monthly.

FREE BOOKLET tells how to Start Your Own Business

With no obligation, we'll mail you a letter and 24 page booklet explaining this business . . . how and why your income grows . . . how we help finance you.

Then decide if this opportunity fulfills your dream of independence and a much **bigger income.**

Your location should be taken tomorrow . . . so mail coupon **today.**

Find Out with NO OBLIGATION

The Duraclean Route to Success

in a dynamic business of your own

What it can mean to you

Mail this coupon TODAY

It may put you in business

Duraclean Co., 4-70 N Duraclean Bldg., Deerfield, Ill. 60015

With no obligation, mail letter with 24 page illustrated booklet explaining how I can increase my income and family security with a Duraclean Dealership.

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Address_____

City_____ Zone____ State_____

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The raw beauty and vast silence of the Plains—the whole colorful epoch of the pioneer! Against this backdrop a mysterious rider and the girl he loves *gamble their lives in the winning of the West!*

As you read this great adventure, you'll see why it's the most popular Western ever written! Read by over 2 MILLION. Made into 4 thrilling motion pictures!

THE LONE STAR RANGER

"The Rangers mean law and order for Texas," Buck Duane's uncle tells him. "Kill a man and you're ruined. If you resist arrest, they'll shoot you. If you submit, you'll mebbe *hang!*"

But Buck *has* to kill Cal Bain. So he rides away toward the Rio Grande—to find refuge in that wild borderland country that is still untamed.

CAPTIVES OF THE DESERT

"Man, you're crazy . . . ridin' after them thievin' varmints *without a gun,*" High-Lo told John Curry. His words died on his lips. Standing before them were the very two gunslingers Curry had sworn to run out of the territory! "Ride one step closer," they warned, "and you'll be feelin' some *hot lead!*"

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IMAGINE! ALL 3 Western thrillers described above are yours *for only $1.00* — to introduce you to the magnificent matched library series of Zane Grey "Golden West De Luxe Editions."

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SHADOW ON THE TRAIL. Quick-shooting Wade Holden fights with rawhide-tough rustlers.

ROGUE RIVER FEUD. Violence and death on Rogue River, where men stopped at nothing!

DESERT GOLD. Spine-tingling adventures of men and women crazed by the lure of riches.

WEST OF THE PECOS. This hard-riding straight-shooting young man turns out to be a *girl!*

THE MAVERICK QUEEN. Where men make their own laws with flaming guns — blazing action over a woman the vigilantes want to *lynch!*

CALL OF THE CANYON. Smashing drama of death and danger!

30,000 ON THE HOOF. Pioneer Huett battles screaming Indians and lawless rustlers.

Other great volumes include: WILD HORSE MESA; THE VANISHING AMERICAN; FIGHTING CARAVANS; THE HASH KNIFE OUTFIT; THE MYSTERIOUS RIDER; TWIN SOMBREROS; THE HERITAGE OF THE DESERT; WESTERN UNION; UNDER THE TONTO RIM; ROBBERS' ROOST; SHEPHERD OF GUADALOUPE; THUNDER MOUNTAIN; TO THE LAST MAN; THE MAN OF THE FOREST; many more Zane Grey classics! All complete — not a thrilling word is cut!

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